Rocky Flats
Environmental Technology Site

MAN-066-COOP

REVISION 0

SITE CONDUCT OF OPERATIONS MANUAL

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Site Conduct of Operations Program Manager — Print Name — Date

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1. OVERVIEW

A. Purpose

The purpose of this Manual is to define the RFETS Conduct of Operations program in order to comply with Department of Energy (DOE) Order 5480.19, "Conduct of Operations Requirements for DOE Facilities." This revision is a total rewrite and revision bars are omitted. This revision incorporates the provisions of, and supersedes 1-31000-COOP-001, Conduct of Operations; 1-31000-COOP-002, Internal Surveillance Program; 1-31000-COOP-003, Control of On-Shift Training; 1-31000-COOP-004, Vital Safety Systems Operational Status; 1-U70-COOP-005, Authorization Basis Tracking and Documentation; 1-31000-COOP-006, Operating Area Logs and Records; 1-31000-COOP-007, Shift Relief and Turnover; 1-31000-COOP-008, Control of Caution Tags; 1-31000-COOP-010, Control of Operator Aids; 1-31000-COOP-011, Pre-Evolution Briefing; 1-31000-COOP-012, Shift Operating Rounds; 1-G58-COOP-013, Standing, Shift and Operations Orders; 1-31000-COOP-014, Independent Verification; 1-31000-COOP-015, Communications Criteria; 1-31000-COOP-016, Plan-of-the-Day (POD); 1-31000-COOP-017, Controlled Deactivation of Alarms; and 1-C15-COOP-020, Termination of Operations Process, and includes all previous Document Modification Requests (DMRs) and revisions prior to June 23, 1998.

B. Scope

Conduct of Operations is the Site core culture of formality and discipline wherein individuals seek and accept ownership of assigned systems and equipment. Formality and discipline provide uniformity and excellence in accomplishing work. It is also:

- knowledge of requirements, and discipline in observing requirements in order to have an adequate "Safety Culture" at the Site
- formal, disciplined, and effective control of work

- founded upon training, qualification, and use of procedures

Conduct of Operations establishes a methodology for conducting operations which involve risks to personnel and/or the environment. This methodology depends upon formality and discipline, that is, knowing and following established requirements, and conducting work/operations in an orderly and prescribed manner. Applying formality and discipline will enable RFETS employees to achieve enhanced safety, consistency, and excellence in operations. This Manual applies across the spectrum of work conducted at RFETS, in both operational and support groups. In a broad sense, Conduct of Operations principles apply to all endeavors at RFETS.

This Manual identifies mandatory elements and requirements by using the word **"SHALL"**. Additionally, the use of the word **"Should"** indicates a recommendation based on good business practice and good industry practice. The Manual also provides prescriptive direction in some areas which is not normally the case for a Manual. This has been done so the Manual can be implemented on-the-floor, as much as possible, without promulgating additional implementing documents. Since DOE Order 5480.19 and this Manual provide for use of the "Graded Approach", the applicability of the requirements contained in the Manual to a particular facility or support organization is determined using the Graded Approach explained below.

The managers of operations and support organizations apply the Guidelines of DOE Order 5480.19 and the requirements of this Manual to their organizations according to the Graded Approach. This means applying Conduct of Operations requirements at the appropriate level of rigor. DOE Order 5480.19 directs use of the Graded Approach to "assure that the depth of detail required and the magnitude of resources expended for operations are commensurate with each facility's programmatic importance and potential environmental, safety, and/or health impact." This is accomplished by Facility Managers submitting a Rocky Flats Graded Approach Matrix of Applicability for Integrating Management Contractor and Department of Energy, Rocky Flats Field Office approval.

C. Conduct of Operations Background

Conduct of Operations has been implemented previously using the graded approach in RFETS operations and support organizations. Those organizations use a Matrix of Applicability (Rocky Flats Graded Approach Matrix of Applicability) to indicate compliance. The matrix identifies applicability to the organization of each Guideline of DOE Order 5480.19, and lists those directives which implement the Guidelines. The matrix satisfies the requirement of the DOE Order to assess and document applicability. Using the Applicability Matrices, and assessing compliance in their organizations against the Graded Approach criteria, RFETS managers have documented implementation of Conduct of Operations requirements several times since 1991. DOE-RFFO approval of the 1996 submission of Matrices of Applicability, and Implementation Plans was received by Kaiser-Hill Company, L.L.C. (Kaiser-Hill) on July 29, 1996.

A "crosswalk" matrix showing the crosswalk between the former Conduct of Operations Manual and this revision is included in Appendix 33. It lists the DOE Order Guidelines, identifies the sections of the Manual formerly applicable, and identifies the applicable sections of the new Manual. By using this crosswalk matrix and the previously approved Matrix of Applicability, a manager can make the comparison in order to ascertain how Order Guidelines were met in the former Manual, and are met in this revision.

Maintaining adequate Conduct of Operations in facilities and organizations at RFETS is not a static achievement. Continuing training and positive reinforcement by management are required to reap the benefits in safety and efficiency that derive from Conduct of Operations, and to promote continuing improvement. In addition, the Ten Year Plan for the consolidation and closure of RFETS facilities requires many facilities to change mission and operating status periodically. Some are removing major quantities of radioactive and hazardous materials, are ceasing ongoing operations, and will undertake Decontamination and Decommissioning (D&D). Facility changes may require managers to submit revisions to the Applicability Matrices for their organizations, often to reduce requirements as hazards decrease or as Authorization Basis (AB) requirements change.

Historically, the Conduct of Operations Manual and other Site program requirements were developed in parallel in the early 1990s. One result is that some requirements of DOE Order 5480.19 were addressed in documents other than the Conduct of Operations Manual, such as Lockout/Tagout in the Health and Safety Practices (HSP) Manual, and procedure requirements contained in MAN-001-SDRM, Site Documents Requirements Manual (SDRM). Also, the Manual included subjects not addressed in the Order. The Plan-of-the-Day (POD) and Pre-evolution Briefings are examples. The Manual has also contained requirements such as Compliance Tracking, and Termination of Operations Process and AB Management, appropriate for nuclear facilities, but not required by DOE Order 5480.19. For these reasons, the sections of the Manual do not match the topics of the chapters of the Order subject for subject. As before, individual managers will continue to implement Conduct of Operations requirements through Operations Orders and procedures appropriate to their needs. The Manual is designed for implementation on-the-floor as far as possible without additional implementing documents except where specified. Company specific Conduct of Operations Manuals are neither required nor desired.

In addition to the above, this revision incorporates operational formality concepts from other documents, and Integrated Safety Management System elements. The Defense Nuclear Facilities Safety Board (DNFSB) Technical Report, Operational Formality of Department of Energy Nuclear Facilities and Activities (Tech 15) addresses the concepts of Safety Culture, Defense in Depth and Framework of Controls, and describes training and qualification, maintenance, surveillance and configuration management needed to support these concepts. Tech 15 describes a strategy of tailoring formality of operations to the needs of the organization (graded approach). Similarly, this revision includes Integrated Safety Management System (ISMS) elements. Safety and Conduct of Operations have close parallels in the culture and practices which foster safe and effective work. ISMS depends on a culture in which workers participate in the identification of hazards, and are encouraged to give constructive feedback in the work planning and execution process. ISMS also depends on well defined controls for accomplishing work. These are elements of Conduct of Operations as well. The POD

and pre-evolution briefing requirements have been enhanced in this revision in order to facilitate implementation of ISMS on the floor. Refer to 1-MAN-016-ISM, Integrated Safety Management System Manual, for additional ISMS information.

Finally, this revision reduces administrative requirements, and recognizes the change in organization from a Management and Operating Contractor to an Integrating Management Contractor (IMC) and principal subcontractors (PSCs). The IMC is Kaiser-Hill Company, L.L.C. (Kaiser-Hill), and the four principal subcontractors are DynCorp of Colorado, Inc. (DynCorp), Rocky Mountain Remediation Services, L.L.C. (RMRS), Safe Sites of Colorado, L.L.C. (SSOC), and Wackenhut Services, L.L.C. (WSLLC).

Because this Manual sets forth requirements for Site facilities and organizations with different missions and organizational structure, logical interpretations must often be made. For instance, where the Facility Manager's responsibility is described, organizations which do not have Facility Managers interpret the title as, "Facility Manager or equivalent line management." Also, tasks or responsibilities assigned to positions such as Shift Manager (SM) or Shift Technical Advisor (STA) must be assigned to appropriate personnel in organizations not having SM/STA positions or which use different terminology for an equivalent position (such as Configuration Control Authority). Managers of facilities affected by this **SHALL** assign these responsibilities to the appropriate positions using directives such as procedures, Operations Orders, or other documents. Clearly defined responsibilities are essential for contributing to safe operations as facilities undergo complex and often hazardous activities associated with closure.

D. Implementation Requirements

Because there have been numerous organizational, structural, and mission changes affecting operations and support organizations since July 1, 1995, and since there will be continuing change as companies pursue closure of RFETS, it is necessary for operations and support organizations to update and submit their Conduct of Operations Matrix of Applicability. Accordingly, operations and support organizations are required to

update and submit (to the Kaiser-Hill Conduct of Operations Program Manager), their Rocky Flats Graded Approach Matrix of Applicability by September 30, 1998. This will also be tasked separately by letter as the Manual is distributed. Achievement of implementation for this revision includes making changes to documents, forms, and records in use which change due to this revision. It is required that facilities and organizations revise their Conduct of Operations related documents, forms, and records to comply with this revision by December 30, 1998. Each company will assess implementation of this revision by December 30, 1998. One exception is that ISMS requirements (pre-evolution briefing, job task briefing, and POD requirements) must be implemented by September 30, 1998.

Project Managers involved in closure activities **Should** include a milestone in Project Plans to require revision/update and submission of the affected Rocky Flats Graded Approach Matrix of Applicability when major organization changes, AB changes, or hazard reductions occur.

E. Disposition of Records

A number of quality assurance records are generated and retained as a result of requirements in the Manual. They are retained and subsequently dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources. Retention requirements vary, and are included in individual Manual sections.

2. RESPONSIBILITIES

A. Integrating Management Contractor (IMC) President

- maintains responsibility for overall operation of RFETS
- approves RFETS Conduct of Operations policy

B. IMC Vice President for Nuclear Operations

- sponsors the RFETS Conduct of Operations program through the Conduct of Operations Program Manager

C. IMC Conduct of Operations Program Manager

- develops and maintains the Site Conduct of Operations Manual, and is the Site Conduct of Operations Program Manager, and Program Owner
- oversees Conduct of Operations implementation at RFETS and reports major status changes to Department of Energy, Rocky Flats Field Office (DOE, RFFO) periodically
- serves as Subject Matter Expert for Conduct of Operations issues at RFETS, and maintains documents required to manage, as Program Manager, the Conduct of Operations Program

D. RFETS Principal Subcontractor Presidents

- implement operational practices to comply with RFETS Conduct of Operations requirements and policy
- ensure training on, and implementation of, the Conduct of Operations Manual as it applies to their areas of responsibilities using the Graded Approach
- ensure that operations organizations establish safety, environmental and operating goals

- ensure development of operations procedures in accordance with the requirements of Section 5.C of this Manual and MAN-001-SDRM, Site Documents Requirements Manual (SDRM)

- ensure that line management periodically monitors and assesses performance, and that personnel are held accountable for performance

E. Line Management

- is responsible for safety. This includes setting the safety culture, providing clear roles and responsibilities, setting expectations for performance, assuring personal competence is commensurate with the individuals' work responsibility, and balancing priorities to ensure safety is top priority

- ensures that assigned personnel are kept informed of activities, evolutions, operations, and events that may affect operations

- communicates performance expectations and standards through training and ongoing personal involvement in daily operations and activities

- promotes open communications to encourage personnel at all levels to provide input and feedback

- includes an assessment of operating performance, where appropriate, in performance appraisals and promotions for operations supervisors

- periodically monitors and assesses performance by frequent direct observation of personnel performing operations activity, holds personnel accountable for performance, and takes action to correct deficiencies

- conducts counseling, training, and when necessary, disciplinary measures, to promote personal accountability

- promotes self-assessment at all levels, and continuous improvement as a matter of routine

F. Facility Manager (FM)

Since organizational changes will occur as the Ten Year Plan is pursued and major risks/hazards are reduced, the responsibilities indicated for FM, SM, and Shift Technical Advisor (STA) may become the responsibility of another job position/title, or may become unnecessary. It is recognized that Conduct of Operations requirements will change with the mission, and will be discontinued in many facilities when hazardous operations and activities have been concluded. For example, it is expected that SM/STA responsibilities may be combined into one position (Configuration Control Authority) as facility missions and organization structures change. Accordingly, each affected organization **SHALL** promulgate which positions in the organization have the responsibilities indicated in Sections 2.F through 2.H.

The Facility Manager:

- ensures compliance with Authorization Basis (AB) requirements

- ensures that operations are performed in accordance with appropriate procedures

- ensures that procedures are developed and implemented for operational activities

- ensures that operator aids, logs, round sheets, lockout tags, caution tags and information tags are implemented and controlled in accordance with Manual requirements

- ensures that the POD is managed in order to achieve effective and productive use of resources

- approves the POD

- maintains authority over tenant organizations working in respective facilities, for scheduling of tasks, and compliance with Conduct of Operations requirements

- attends POD meetings, fact finding meetings, and work planning meetings regularly

- approves operations related documents as required by individual sections of this Manual (Operations Orders, temporary modifications, etc.)

- ensures that positions requiring shift relief and turnover are identified

- ensures that status display requirements are identified and implemented

- ensures that the required quality assurance records are completed and maintained

- ensures, on an ongoing basis, that personnel understand and follow safety requirements and practices

- approves facility unique procedures. Authorizes implementation of multi-building/location technical procedures per MAN-001-SDRM, Site Documents Requirements Manual, and establishes a method to regularly communicate to operations personnel important information about new and/or revised manuals and procedures used in the facility

- ensures control of facility visitors in accordance with Training Users Manual requirements, and Security Manual requirements

- authorizes the maximum trainee-to-instructor ratio to be used in facility operations

- proactively seeks ways to improve safety performance

- develops safety, environment and operating goals for his/her organization, and promulgates performance indicators for those goals. Goals are used for improving performance of individuals and groups, and to measure effectiveness. Goals in the following areas may be appropriate:

  - improvement in Authorization Basis compliance

  - reducing injuries and accidents

  - facility availability to do mission work in nuclear facilities

  - minimizing personnel performance errors

  - minimizing overtime

  - minimizing waste where possible

  - minimizing alarms

  - others as established by management

- develops a long-range staffing plan that takes into account planned mission change and personnel losses. The staffing plan may be part of the facility Quality Assurance Plan or applicable facility program plan. Staffing plans may also be required by the Authorization Basis

- ensures good housekeeping practices are followed throughout the facility

- reviews events and provides training as necessary for facility personnel, and ensures that events and occurrences are trended

- for new facilities, develops a Conduct of Operations Implementation Plan and Implementation Matrix to achieve compliance. For existing facilities, revises the Rocky Flats Graded Approach Matrix of Applicability as major mission or facility status changes occur as indicated in Section 1

- develops implementation plans to ensure satisfactory implementation of revisions to the existing Authorization Bases, and satisfactory implementation of new Authorization Bases

- implements a method by which the Facility Authorization Basis is kept up-to-date administratively as documents referenced in the AB change

G. Shift Manager (SM)

- the SM is the operations authority on shift

- maintains control, authority, and responsibility for all activities occurring during the assigned shift

- authorizes commencement of activities scheduled on the POD

- ensures compliance with AB requirements. This includes being the authority for declaring termination and suspension of operations, and AB violations

- categorizes events in the facility, and reports events in accordance with 1-D97-ADM-16.01, Occurrence Reporting Process

- participates in POD meetings as required by the FM

- attends pre-evolution briefings, as required by the FM, to ensure quality of the pre-evolution briefings, and to ensure that hazards and controls are adequately briefed

- periodically monitors performance of personnel conducting work

- ensures that shift relief and turnover is conducted by required personnel

- personally ensures completion of shiftly, daily, and weekly LCO surveillances to ensure on-time accomplishment. Ensures that a status display available to the SM is maintained for this purpose

- performs as Incident Commander for facility emergencies until relieved in accordance with the Emergency Plan and Building Emergency Response Organization requirements

- in nuclear facilities where applicable, ensures that status and protection of Special Nuclear Material during routine and emergency situations is in accordance with the requirements of the Safeguards and Accountability Manual - General Requirements, 1-MAN-010-S&A, and the Rocky Flats Nuclear Material Control and Accountability Plan

- notifies the Central Alarm Station if it is necessary to penetrate a security barrier during routine or emergency situations, including maintenance activity, and makes notifications in accordance with 1-MAN-026, Security Manual, in the event of a security incident or a compromise of classified material

- ensures that operational communications are clear and concise. This includes monitoring that use of the Life Safety/Disaster Warning system is not excessive, and is not used inappropriately

- ensures that facility status is maintained

- ensures that Safety Structures, Systems and Components (Safety SSC) being initially brought into service or being returned to service comply with Section 7.G and Appendix 26 requirements

- ensures that independent verifications are performed where required by the FM

- notifies the FM if any individual bypasses or attempts to overrule his/her operational authority

- delegates authority where appropriate for routine operation of equipment and systems to Stationary Operating Engineers, operations personnel, and evolution supervisors. May personally control complex operations or activities as required by the FM

- performs facility tours at least once each shift. A shift for this purpose is the period for which the SM is assigned, e.g., six (6) hours, eight (8) hours, or (12) twelve hours

- ensures that responses to alarms and off-normal events are appropriate and are documented

- ensures that major activities and events occurring during the shift are documented in the Shift Manager's log. Documentation of granting authorization to perform POD activities is not required

- notifies the FM if scheduled POD activities cannot be conducted, and initiates action with functional managers to shift personnel to other assignments

- notifies the DOE Facility Representative and the IMC Representative of occurrences and other items as indicated in later sections of the Manual

H. Shift Technical Advisor (STA)

- is assigned as required by the facility Authorization Basis
- provides technical information and assistance to SMs and on-shift personnel about facility structures, systems, and components, and operations
- supports facility management by providing independent evaluation of compliance with Authorization Basis and other operational requirements to the SM and FM on an ongoing basis
- maintains cognizance of ongoing work, and regularly evaluates performance of personnel conducting operations, maintenance, surveillances, and other activities for adequate procedural compliance and adherence to safety requirements
- routinely attends pre-evolution briefings to emphasize safety, hazards awareness, and hazards controls
- reviews maintenance work packages and operations procedures for technical accuracy as assigned by the FM or SM
- tours the facility at least once during the assigned shift
- assists the SM and/or Incident Commander during emergencies by providing technical information about operations, and helps with event cause determination and determination of actions to mitigate the event

- if an unsafe condition or practice occurs or is thought about to occur, stops the activity and directs equipment be placed in a safe and stable condition, and informs the SM

I. **First Line Supervisors and Managers**

- regularly communicate expectations for workers consistent with the mission, and facility safety, environmental, and operating goals

- in the assigned area of responsibility, perform assessments to determine performance relative to expectations and requirements

- provide regular feedback to subordinates in order to improve performance

- ensure optimum effectiveness, productivity, and safety of workers by monitoring work frequently, touring work areas, and addressing safety issues and other problems including distractions and fitness for work. Monitor use of correct personal protective equipment at work sites on a regular basis

- monitor work progress regularly, and take action to reassign personnel when work is interrupted in order to maximize use of available resources. Maintain readiness to reassign personnel on short notice

J. **Operations and Support Personnel**

Operations personnel conduct operations or other work activities in the facility to which they are assigned full time. Stationary Operating Engineers (SOEs) who work in multiple facilities are operations personnel. Support personnel conduct surveillances and other work activities in facilities on a part time or rotating basis, and are not assigned to the facility, or are technical or engineering personnel supporting operations or other work

activity in facilities. Operations and support personnel responsibilities include the following:

- being knowledgeable of system and equipment status when conducting operations or other work
- observing activities and conditions in the work area and reporting problems, anomalies, upsets, and requirement non-compliances to the SM
- maintaining status displays at work stations if required by the FM
- taking the necessary immediate action in an emergency in order to ensure personnel, facility, and environmental safety without obtaining prior approval, and then reporting to the SM
- ensuring that shift relief and turnover where required, is thorough, complete, and documented
- ensuring that operational communications are clear, concise, and accurate
- if assigned, frequently monitoring control panels for which responsible, and being alert and attentive to control panel indications and alarms
- ensuring that round sheets and logs are complete, accurately reflect the conditions observed and actions taken, and that tours are thorough and complete
- ensuring that deficiencies noted when conducting Authorization Basis surveillances and operations are promptly reported to the SM
- operating equipment at their work station for which they are responsible

- ensuring that responses to alarms and anomalies are accomplished as required by procedures, that they are documented, and that they are promptly reported to the SM

- ensuring that as a matter of routine, good housekeeping is observed, that combustible loading requirements are met, that hazardous materials are not introduced into unauthorized areas, that As Low As Reasonably Achievable (ALARA) principles are observed, and that postings are observed

- ensuring that when conducting work, the hazards are understood, the required controls are utilized, and that the work has been authorized on the POD

- ensuring that work about to be commenced has been authorized to start by the SM

K. Personnel Entering Operational Facilities

- personnel entering operational facilities where work is controlled by the POD **SHALL** obtain permission of the SM (or equivalent operational authority) before commencing work

- visitors, as defined in the Training Users Manual, **SHALL** check-in with the SM upon entering. For facilities without a SM or equivalent, they check-in with the FM

- personnel accessing nuclear facilities are required to satisfy the minimum training requirements based upon access to nuclear facilities and Radiological Buffer Area/Material Access Area (RBA/MAA) as specified in the Training Users Manual, or will be escorted

3. INSTRUCTIONS - GENERAL

A. Operating Philosophy

One fundamental objective at RFETS is to conduct activities which promote the Site mission in a safe and professional manner that complies with applicable laws, DOE Orders, and other requirements. The safety and general welfare of RFETS employees, the general public, and the environment are of primary concern during all daily activities. Consistent with this objective, one goal is to perform mission activities of the highest quality, within budget and on schedule, supported by an environment of formality, professionalism, and teamwork that stimulates and challenges employees to continually improve performance.

Conduct of Operations is the foundation of the Site safety culture. It also requires a personal commitment to maintain the highest standards of excellence. Safe operation begins with engineering design and organizational infrastructure that reflect Defense in Depth (see Glossary definition in Appendix 34). Safe Operation requires individuals to know relevant requirements, and to conduct work in a manner which reflects a safety-first approach to accomplishing the work. This is the desired cultural basis for the Site, starting with senior management commitment to safety and health, and extending to all employees. Included is employees having a strong sense of ownership of the safety program, and for their own personal health and safety. Fundamental to this, is for all personnel to conduct activities in accordance with established requirements and approved procedures. When conducting work and the unexpected occurs, ***stop***, place the work site in a safe condition, and report the condition to supervision. This precept applies across the spectrum from procedures which are incorrect, to experiencing problems or upsets when conducting operations.

B. Authorization Basis (AB)

A nuclear facility Authorization Basis is the set of facility design bases and operational requirements relied upon by the Department of Energy to authorize operation. For the complete definition, see the Nuclear Safety Manual, 1-MAN-018-NSM. Compliance with the Authorization Basis requires continuing adherence to provisions of Authorization

Basis documents. Continuous vigilance by SMs and personnel conducting work which can impact Authorization Basis requirements such as maintenance, equipment operations, surveillances, etc., is needed to ensure that AB requirements are continually met. If compliance cannot be maintained, appropriate remedial/required actions are initiated as specified in the AB for the facility.

(1) Maintaining the Authorization Basis Requirements

Supervisors **SHALL** ensure that approved procedures are being used by their personnel for conducting AB surveillances.

The SM **SHALL** implement AB remedial/required actions as required by the AB requirements in the case of an out-of-tolerance (OOT) condition.

The SM **SHALL** notify the FM of any of the following:

- before intentionally entering an OOT condition
- after unplanned events create an OOT condition
- a condition exists or potentially exists that may affect AB compliance
- an activity is proposed which may be outside the AB
- an OOT condition is cleared

For any activity thought to be outside the AB or for which status relative to the AB is not known, the SM **SHALL** cause a Safety Evaluation Screen under the Unreviewed Safety Question Determination (USQD) process to be initiated to ensure that the activity can be authorized before being conducted.

The SM **SHALL** determine operability status of Safety SSC items in question, and terminate or suspend operations in accordance with Section 7.G, and as specified in the AB for the facility, if required.

The SM **SHALL** ensure that unplanned AB OOT conditions, and violations are reported in accordance with 1-D97-ADM-16.01, Occurrence Reporting Process requirements.

4. INSTRUCTIONS - WORK CONTROL/CONDUCT OF WORK

A. General Controls

The Shift Manager responsibilities in this area are to:

- authorize maintenance and other work activities, major process changes, and major utility system changes
- authorize non-routine operations, evolutions, special testing, and experiments

The Facility Manager (FM) **SHALL** specify in an Operations Order or procedure those routine activities and minor process/utility system changes that may be performed without first informing the SM.

All personnel **SHALL** notify the SM of changes in status of equipment and systems.

Evolution supervisors and Stationary Operating Engineers (SOEs) making minor process changes and minor utility system changes keep the SM informed of the changes.

(1) Personal Involvement for Safe Work

An effective Integrated Safety Management System (ISMS), and safe performance of work at the Site depend on employees taking personal ownership and responsibility to conduct work safely. Inherent in this ownership is each individual paying close attention to the work activity, reviewing the hazards associated with the task at hand, being prepared for the unexpected, and using the correct tools and technique for accomplishing the task. Self-discipline and a sense of personal ownership/accountability by each individual undertaking work are key. Since individuals are charged with accomplishing their work safely, individuals preparing to start work can conduct their own "self-check" before commencing as a way to enhance safety. The elements of the acronym STAR may be considered in this "self-check":

STOP - Eliminate distractions. Correctly identify the equipment/component/system which will be worked or operated.

THINK - about the task, the response expected, and actions required if the unexpected response occurs. Review the hazards and the controls to be implemented for them (industrial safety, radiological, chemical, etc.).

ACT - Conduct the work. Use the correct tools/equipment and technique for the work. Be prepared for the unexpected.

REVIEW - the actual response and take corrective action if the unexpected occurs.

B. Plan of the Day (POD)

The POD is used to schedule, authorize, and control activities in the facility. It is one of the means to achieve safety management functions identified in the ISMS Manual. It is an important forum for resolving conflicts in scheduling work, and providing for discussion about planned activities. Each facility **Should** plan and schedule work activities with about a three month horizon, refine the planning about a week in advance, and translate detail into the POD. The POD lists operations, maintenance, surveillances, inspections, and other activities authorized by the FM. The content of a typical POD is

provided in Appendix 1. Appendix 2 provides a sample format for a POD and a Plan of the Week. In order to maximize effectiveness of the POD for accurate planning, items **Should** not be scheduled on the POD until they are ready to be performed. The POD **Should** be held each work day unless scheduled less frequently by the FM, or held at the frequency specified in the facility Authorization Basis. The FM approves the POD.

(1) Control of the POD and POD Requirements

The POD **SHALL** be issued to cover all periods of operation in the facilities and areas it serves.

The POD **SHALL** cover at least a twenty-four (24) hour period in detail, and **Should** provide for a seven (7) day period for planning. A POD and a Plan of the Week may be used to satisfy this, or a POD covering seven days may be used.

The POD **Should** be issued with sufficient lead time to be available to the workforce, SMs, and managers before it becomes effective, and a copy **Should** be posted in the facility.

The POD **SHALL** designate which items require a pre-evolution briefing.

POD meetings are conducted to schedule and coordinate activities for the next day and to discuss upcoming work for the next week. The meeting agenda includes the following items as applicable:

- a discussion by the SM or manager conducting the POD meeting of facility status (building availability for mission work, terminations affecting work, major activities ongoing, etc.)

- a discussion of the non-routinely conducted items scheduled on the POD

- for each operation and major maintenance item, a discussion of any impacts of other work activities or other concurrent activities (cumulative impacts) on the item being scheduled

- discussion of need for security escorts, or escorts for training

- reports by attendees on items within their area of responsibility as necessary to achieve coordination and improved productivity

- discussion of upcoming events and activities which will impact scheduling of work

- deconfliction of scheduled work activities

- allocation of critical and limited personnel resources

- a discussion of how resources will be shifted when an activity is stopped/delayed so as to maximize use of resources throughout the day

- a discussion of maintenance planned on security barriers

The FM **SHALL** determine personnel required to attend the POD meeting. The FM **Should** attend frequently to ensure quality of the POD. The FM may delegate control of the POD meeting to another manager.

The FM **SHALL** ensure that new activities added to the POD are authorized on the Master Activity List (MAL). This requirement only applies as long as the MAL is used at RFETS.

The SM **SHALL**:

- approve additions and other changes to the POD

- notify the FM if scheduled POD activities cannot be conducted, and initiates action with functional managers to shift personnel to other assignments

- maintain the master copy of the POD

Personnel desiring activities to be scheduled **Should** submit a completed Evolution Request Form or equivalent request with sufficient lead time for inclusion of the evolution on the POD. (See Appendix 3, Evolution Request Form).

Personnel requesting non-routinely conducted activities to be placed on the POD **Should** attend the POD meeting to provide information about the activities.

C. Pre-evolution Briefings (PEBs) and Job Task Briefings (JTBs)

Pre-evolution Briefings (PEBs) and Job Task Briefings (JTBs) are performed to ensure that personnel preparing to conduct operations and other work understand what is to be performed, understand the hazards and controls, and have an opportunity to ask questions or raise concerns. The PEB is more formal. It is a forum for accomplishing ISMS safety functions at the floor level. The PEB provides for feedback as well as for reviewing the scope of work, and reviewing the hazards and the controls to do the work safely. It is also a point in the work process to confirm that the required prerequisites are in place. A JTB is less formal than a PEB, is conducted by the foreman with the workers involved, and serves as one method by which the ISMS process is implemented on-the-floor for noncomplex, routine, and low hazard work activities. A PEB is documented; a JTB does not have to be documented.

(1) Evolutions Requiring a PEB

The following evolutions, as applicable to the scheduled work, **SHALL** be evaluated at the POD for having PEBs conducted:

- radioactive decontamination
- maintenance on systems which contain radioactivity
- startup of all new process or mission program activities
- conducting mission program activity
- experiments and tests
- non-routinely conducted work requiring special personnel protective equipment
- shipment, transfer, or inventory of fissile materials, including movement of drums containing radioactive material
- maintenance work packages which involve Safety Structures, Systems, and Components (Safety SSC), involve welding or cutting, confined space work, or work on energized electrical equipment
- construction work
- demolition and facility decommissioning work
- non-routine work with chemicals
- non-routine work with hazardous substances
- infrequently conducted operations, surveillances, maintenance, and preventive maintenance activities that operate equipment or systems, or have hazards associated with conducting the activity

- LCO surveillances conducted monthly or less frequently
- recovery actions/reentry actions when recovering from an upset condition
- other items as required by the facility Authorization Basis
- other items for which a PEB is scheduled on the POD

For regularly occurring operations (e.g., nearly daily) which have become routine (Caustic Waste Treatment, Salt Stabilization, Dry Repack, etc.), the FM may elect to do one comprehensive PEB at the start of the week and then do shortened PEBs the remainder of the week. The shortened PEBs would concentrate on hazards, controls, and recent problems or issues. Documentation requirements are the same, except only Parts A, B, C, 6, 8, 9, 23, 26, 34, and 35 of Appendix 4 need to be covered.

The SM or other designated manager **Should** attend PEBs for complex evolutions. This **Should** be decided at the POD meetings. The Evolution Supervisor conducts the PEB.

(2) Preparation for the PEB

The Evolution Supervisor prepares for the PEB as follows:

- takes action as necessary to elicit information from subject matter experts (SMEs) and workers to obtain the benefit of the Enhanced Work Planning process which planned the evolution
- schedules the PEB on the POD, and coordinates with the SM to identify and evaluate the impact of the activity on other activities in the facility ongoing concurrently, and to evaluate ongoing activity impact on the planned evolution

- identifies resource support needed for the evolution (RCT, NMC, security, etc.), and identifies the number of trainees to be involved

- verifies that procedures to be used for the activity are current

- conducts a walkdown prior to the evolution if not previously accomplished through dry-runs and evolution training

- conducts the PEB as close as practicable to the start of the evolution, notifying participants of the PEB and evolution start time in advance

- if practical, conducts the PEB at or near the actual evolution site

- ensures that RWPs and other work permits will be in place, and that 4-B19-NSM 03.12, Nuclear Material Safety Limits and Criticality Safety Operating Limits Validation, if required, is scheduled and that the results will be reported to the Evolution Supervisor prior to activity start

- ensures that appropriate personnel involved in the evolution have their copy of procedures prior to the PEB

- ensures that all personnel performing the evolution, personnel who may be affected by the evolution, and all trainees involved attend the PEB. This is especially important when multiple disciplines or companies are involved. The Evolution Supervisor may brief selected individuals separately if necessary

- uses Appendix 5, Hazardous Material Release Prevention/Preparedness Checklist, if applicable, in order to:

- identify hazards, and hazardous materials associated with the evolution. This identification includes nearby hazardous materials, and other activities which may be impacted by the evolution

- identify potential "failure points" in the evolution that could result in the release of hazardous material. Failure points may include valves, test equipment connection points, gauges, hoses, tubing, movement of hazardous materials, etc.

- identify controls for prevention/minimization of release, and for controlling hazards. Controls include physical barriers and administrative controls

- identify hazardous work situations (such as elevated work, working on electrical equipment, or confined space entry) and appropriate safety precautions to minimize risk

- determine the pre-planned response to be taken in the event that an unplanned release or other emergency occurs

The Evolution Supervisor may assign Subject Matter Experts to cover their areas. For example, an Industrial Hygienist to discuss hazardous materials, and the Criticality Safety Officer (CSO) or a Criticality Engineer to discuss the criticality safety analyses and nuclear hazards, etc.

(3) Conducting the PEB

The Evolution Supervisor conducts the PEB according to the following guidelines:

- ensures that security and training escorts are assigned and instructed on their responsibilities

- discusses limitations on trainees operating equipment/taking rounds and making log entries unless directly supervised by the qualified OJT instructor

- ensures that a sufficiently comprehensive briefing of the evolution is conducted, and that applicable items from Appendix 4, Pre-evolution Briefing Record, and from Appendix 5 are discussed. Hazards, controls, RWPs, and potential upset conditions **SHALL** receive emphasis. The Evolution Supervisor is responsible to decide which briefing check-off list items are covered and which are not applicable

- briefs the evolution to be conducted in sufficient detail to ensure all participants understand the evolution and their role. Covers work packages or procedures to the depth necessary to accomplish this

- briefs changes to the procedures or work packages relevant to the activity which occurred since the activity was last conducted

- ensures understanding of the evolution by participants by asking open ended questions regarding their roles and responsibilities, and actions to take if problems or upset conditions occur

- documents the briefing using Appendix 4, and forwards the completed Appendix 4 to the Evolution Supervisor's supervisor for filing, unless it is retained in a work package

- repeats the PEB when any of the following occur:

  - shift change for multi-shift evolutions

  - personnel changes considered significant by the Evolution Supervisor or SM

  - evolution is stopped for more than forty-eight (48) hours

  - the scope of the evolution changes

- intent changes are made to the procedures being used for the evolution

The PEB checklists are retained for a year. After a year, they are dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

(4) Job Task Briefings

A JTB is a process in which the foreman interfaces with the workers as they are assigned work activities which do not require a PEB. The purpose of the JTB is to have the foreman discuss with the workers the hazards (industrial and others), the controls, and the correct tools/equipment, and techniques to be used for the work. The JTB is not documented. The expectation is that JTBs be conducted for all Site work activities which involve hazards, that the foreman be satisfied that the hazards are recognized, and that proper controls will be applied by the individual workers. Questions **Should** be asked to confirm that these are understood. JTBs are not required for office work, housekeeping, tours, inspections, and other work activities which clearly do not normally have industrial or other hazards associated with them. JTBs would be appropriate, for example, for moving heavy equipment that is not routine for the workers involved, and for lifting heavy items by individuals. JTBs are also held for additional activities as required by the FM or other responsible manager. Managers **Should** periodically observe JTBs to ensure their quality.

D. Work Stations and Control Rooms

Work stations are established as necessary for operations and support personnel having on-shift responsibilities, and are equipped with, or have access to, necessary reference material including manuals, procedures, drawings, communication equipment and office equipment. Access to control rooms which monitor equipment or systems is limited to persons with a need to be in the area. Control room boundaries **SHALL** be clearly marked, and permission to enter **Should** be granted by the responsible control room watchstander (such as Process Control Room Operator, SOE, etc.) or the supervisor. A

professional and businesslike atmosphere conducive to safe and efficient operation is to be maintained.

(1) Requirements

Operators who monitor equipment and system status are required to tour their areas of responsibility periodically and early enough in the shift to become aware of equipment status and unusual conditions. Tours **Should** be thorough and of all accessible areas for which responsible, and be conducted at least once a shift. During a tour, operating equipment **Should** be inspected, and a thorough inspection of the areas for safety and housekeeping conditions **Should** be conducted.

Supervisors/SM **SHALL** take action to preclude activities that may interfere with personnel conducting operations.

The SM **SHALL** maintain an up-to-date list of selected personnel by name, title, pager, and work and home telephone numbers for notification and recall purposes.

Operators **SHALL** be attentive and responsive to operating parameters. Those responsible for facility or process control panels **SHALL** be alert and attentive to the panel indications and alarms. They are to be monitored frequently and prompt action taken to determine the cause of, and to correct abnormalities.

Work distractions **SHALL** be prevented in order to maintain a professional work environment. Magazines, newspapers, radios, games, and other distractive items and activities not related to the job or facility operation are prohibited.

Training materials, technical manuals, procedures, operator aids, or other materials that relate to operator responsibilities may be used at work stations as long as the operator's primary responsibilities are not compromised.

Housekeeping **Should** be performed in accordance with 1-62200-HSP-13.08, Housekeeping and Sanitation, as an integral part of routine work.

Operators, support personnel, and other personnel **Should** take appropriate action to correct and/or report deficiencies when found. Appropriate log or round sheet entries are made, and Integrated Work Control Program (IWCP) corrective action initiated as necessary.

E. Abnormal Events and Emergencies

In the case of abnormal events, one primary concern is operation of the facility within the Authorization Basis. Personnel take appropriate emergency actions if there is an immediate threat to health, the facility, or the environment and report actions taken to the SM at the earliest possible time. In an emergency, operators may take whatever action is necessary to place the facility in a safe condition, and to protect equipment, personnel and public safety, and the environment.

If an abnormal condition is not an emergency, or if personnel on scene cannot take corrective actions, the condition **SHALL** be immediately reported to the SM, who will coordinate control of the condition.

Circumstances, such as occurrences, concerns, conditions, or events which could have a negative impact on safety **SHALL** receive an appropriate response including identification, notification, categorization, investigation, evaluation, tracking, trending, and corrective action. Occurrences are categorized, reported and administered in accordance with 1-D97-ADM-16.01, Occurrence Reporting Process.

F. Temporary Modification Control

Temporary Modifications (TM) are changes thought to be of a temporary nature (less than six months) to systems, structures, and components which are minor in scope and

planned to be in place for a short period. They include electrical jumpers, lifted leads, pulled circuit boards, disabled annunciators/alarms, mechanical jumpers/bypasses, temporary set-point changes, installation or removal of blank flanges, disabled relief or safety valves, installation or removal of filters or strainers, plugging of floor and other drains, temporary pipe supports, and items of a similar nature. Although planned to be temporary, TMs may stay in place indefinitely if considered appropriate by management based on such considerations as facility life, cost, or need. TMs can therefore remain in place as long as the safety evaluation screens conducted when extending them do not indicate otherwise.

Individuals desiring to make a temporary modification initiate the process by filling out an IWCP form and processing it for work package development and review, and safety evaluation screen in accordance with the requirements of the Integrated Work Control Program Manual. TMs which are part of design packages are prepared according to 1-V51-COEM-DES-210, Design Process Requirements or its replacement Site Engineering Requirements Manual (SERM), MAN-027-SERM. In either case, the IWCP/design package is processed, and the affected facility contacted to initiate the TM administrative process. TMs are administered by the affected facility. The requesting individual initiates action by completing the Temporary Modification Request Form, Appendix 6. The Facility Engineering Manager determines the expiration date. Temporary changes resulting from a step in a surveillance procedure, and which are returned to normal in the surveillance procedure, are excluded from the requirements of this section. Similarly, changes which occur as a step in an operating procedure that are returned to normal in the operating procedure, are excluded from the requirements of this section.

After the top half of Temporary Modification Request Form is filled out, the TM is safety evaluation screened, reviewed by the SM, concurred in by the Facility Engineering Manager, and approved by the FM. The FM determines if training or procedure changes are necessary based on the type of the TM. Appendix 8 is a TM Tag Sheet and instructions for preparation of a TM Tag Sheet and TM tag. Appendix 10 shows a TM tag.

Temporary modifications installed as part of Emergency Work (as defined in the Integrated Work Control Program Manual) are entered into the Temporary Modification Log as soon as possible.

(1) Temporary Modification Log

Each facility which installs temporary modifications **SHALL** maintain a Temporary Modification Log that includes:

- Active Temporary Modification Request Forms (Appendix 6)
- Temporary Modification Log Sheet (Appendix 7), to maintain a current status of modifications
- Temporary Modification Tag Sheets (Appendix 8)
- Temporary Modification Extension Requests (Appendix 9)

(2) Temporary Modification Controls/Extensions

When the TM is being discontinued and closed-out, and the Temporary Modification Tag removed, the SM records date and time of removal and initials in the Restored Date/Initials section of the Temporary Modification Log Sheet, and moves the Temporary Modification Request Form, the Temporary Modification Tag Sheet, and Extension Requests for that TM to the back of the log where they are maintained for two years. After two years, they are dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Storage.

The SM reviews the Temporary Modification Log as part of Shift Relief and Turnover.

Extension may be requested using the Temporary Modification Extension Request Form (Appendix 9). Extensions are each safety evaluation screened, concurred in by the Facility Engineering Manager, and approved by the FM. Indefinite extensions may be approved by the Facility Manager as indicated above.

When an extension has been approved, the SM files the extension next to the request, and updates the Temporary Modification Log Sheet to reflect the new expiration date and the extension date by making a new line entry and lining out and initialing the old entry.

The Facility Engineering Manager reviews the Temporary Modification Log quarterly. The review **Should** include:

- considering whether or not the TMs should continue in place
- considering whether or not the age of the TMs requires follow-on action
- determining which TMs need an extension
- initialing/dating the review on the next blank line of the Temporary Modification Log Sheet

5. INSTRUCTIONS - OPERATING PRACTICES

A. Access Controls

Access controls exist in facilities to ensure safety of visitors and workers, and compliance with security and training requirements. Facility Managers determine and post access training requirements for their facilities. For uniformity and consistency, training access requirements conform to those in the Training Users Manual. FMs are responsible for visitors, and workers assigned to them meeting unescorted security and

training entry requirements or being escorted. They **Should** provide for this in POD preplanning, by covering the requirements at pre-evolution briefings, and by having visitors check-in with the SM upon entry. All managers **SHALL** ensure that employees for whom they are responsible meet facility entry requirements or have escorts if they are assigned work in facilities having access requirements. This includes Contractor Technical Representatives (CTRs) being responsible for subcontractor personnel working at the Site who require access to facilities. See the Training Users Manual for additional information on access training requirements, visitor training requirements, and escort for training requirements. See the RFETS Security Manual for information on access security requirements.

(1) Accountability Badges

Accountability badges are used to provide nuclear facility management with a method to identify personnel in the facility at any given time. By having a badge for every individual accessing the facility as an accountability system, managers can readily ascertain if the personnel exited in an emergency. This can eliminate the need for emergency response personnel conducting unnecessary searches.

Each contractor on Site **SHALL** provide their personnel who access nuclear facilities with accountability badges which display the employees name, employee identification number, and company name.

Each nuclear facility **SHALL** have an accountability process which:

- provides a readily accessible location for personnel to place accountability badges before entering the facility

- conducts drills periodically which includes demonstrating accountability

(2) Access Requirements

There are standard training requirements listed in the Training Users Manual for unescorted access to facilities which handle nuclear materials. Since there are changes periodically, the Training Users Manual must be consulted for the current requirements.

If a FM determines unique entry requirements based on hazards in his/her facility, the FM **SHALL** post those requirements, and **SHALL** communicate those requirements to personnel assigned to the facility, and to outside support personnel who perform work in the facility and their managers, so that workers can arrive for work meeting the requirements for entry.

The FM **Should** ensure that building indoctrination is offered often enough to accommodate the needs of personnel Sitewide who routinely access the facility.

The FM **SHALL** establish a process in the facility so that visitors (as defined in the TUM) are checked for access training status, and escorted when necessary.

All RFETS managers and CTRs **SHALL** ensure that the workers for whom they are responsible meet the access requirements they need. Managers sending personnel to facilities where entry requirements are not met **Should** provide the escorts.

B. Shift Relief and Turnover

For continuously operating facilities with multiple shifts, shift operating personnel retain full responsibility for their responsibilities until properly relieved. Relief is not conducted until shift relief and turnover activities have been completed. A typical shift relief and turnover checklist is provided in Appendix 11. The checklist may be modified to accommodate turnover information appropriate to organizations or groups as necessary to conduct a thorough and complete relief. The checklist is to provide space for recording issues discussed during turnover. The FM **SHALL** identify positions requiring shift relief and turnover, the content of shift relief and turnover checklists, and filing and

review requirements. This **Should** be done in a procedure or Administrative Operations Order governing facility shift relief and turnover. Shift relief and turnover **Should** occur in the area of the work station. The need for entire crew shift briefings will be provided by the FM when circumstances dictate.

(1) Conduct of Shift Relief and Turnover

Off-going shift personnel **SHALL** not turn over responsibilities to oncoming personnel if it appears that those oncoming are not capable of performing requirements of the shift. If an individual is identified who may be unfit for duty, the incumbent watchstander **SHALL** notify the SM or their supervisor to take appropriate actions, including referral to Occupational Health in order to determine the fitness of personnel to assume responsibilities.

The SM documents actions taken resulting in removal of an employee from duties in the SM log.

Personnel in the identified positions **SHALL** utilize a shift relief and turnover checklist to effect relief.

Completion of turnover **SHALL** be documented in the chronological log for the position to signify transfer of responsibilities. This entry is made by the individual going off shift. Acceptance of shift responsibilities may include taking custody of, and responsibility for security keys, radios, and other equipment.

Watchstanders **SHALL** refer to status displays and supporting documents such as logs, round sheets, POD, Shift, Operations, and Standing Orders, appropriate for a thorough shift relief and turnover.

Prior to initiation of shift relief and turnover, oncoming shift operations personnel **SHALL** review logs, round sheets, status, and other items specified by the FM back to when they were last on shift, or for five days (whichever is shorter), in order to become

knowledgeable of current equipment and facility status. This also applies when there is no shift to relieve.

Before, during, or shortly after shift turnover, the oncoming shift operations personnel **SHALL** perform a tour of assigned areas to observe equipment status and conditions.

Unscheduled temporary reliefs occurring during the shift do not require use of a checklist. Operators in the identified positions **SHALL** discuss the elements of shift relief and turnover necessary to ensure that the relief is fully knowledgeable of conditions, and enter the relief in the log.

When operations are completed at the end of the shift and a follow-on shift will not be staffed, off-going shift personnel make close-out entries in applicable logs and round sheets.

When SM shift relief and turnover has been completed, the oncoming SM communicates the SM acceptance of duties and pertinent shift information to facility personnel.

Shift relief and turnover checklists are retained for one year in locations determined by the FM. After a year, they are dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

C. Procedures

Adherence to the requirements of the Kaiser-Hill Procedural Compliance Policy represents a firm commitment to disciplined and safe operations at the Site. The purpose of operating procedures (technical procedures as defined in the Site Documents Requirements Manual) is to provide direction for operating systems and equipment during normal and postulated abnormal and emergency conditions. Procedures are developed with sufficient detail to enable performance of the required function without direct supervision, and are written with sufficient detail depending on the complexity of the task, the experience and training of the operators, frequency of performance, and

consequences of error. Procedures are developed and controlled in accordance with the requirements of MAN-001-SDRM, Site Documents Requirements Manual.

Operations procedures **SHALL** provide for component alignment checklists for start-up. They **SHALL** also, where applicable, specify component positioning to accomplish both short-term and long-term shutdown. Component positioning to start-up a system for the first time or following an extended shutdown for maintenance may be accomplished by a component lineup and verification. In this case, personnel conduct the two independent of each other. When performing a lineup to start-up a system, the normal practice is to have the first individual position the components as specified in the alignment checklist, unless the SM has directed otherwise due to operational considerations. The second individual (if used) verifies that the components are correctly aligned. Both initial the alignment checklists and the SM reviews the checklist when completed. In the case where the SM directs that items not be positioned during the lineup, their position is verified instead. Verification is discussed in Section 7.H, and verification techniques are in Appendix 30. Alignment checklist retention requirements are in Section 7.A.(3).

(1) Use of Procedures

The manner for procedure use is governed by Procedure Use Categories. There are three categories. The three categories are defined in the SDRM. The category is assigned by the responsible manager developing the procedure to identify the manner of use commensurate with the complexity and risk associated with the activity. All procedures are required to be performed as written.

Employees are required to use and comply with applicable procedures.

The FM ensures that procedures are prepared, approved, and used for operations, surveillances, tests, and emergencies within assigned facilities.

The FM implements Site level and company level procedures in the facility as required by the Site Documents Requirements Manual.

Managers responsible for controlling the use of procedures **SHALL** ensure the procedures are controlled to preclude the use of outdated copies by complying with MAN-0063-DC, Site Document Control.

FMs **SHALL** have an administrative process established (such as an Operations Order or procedure) which will provide for conveying information to facility personnel about manual and procedure changes, and new manuals and procedures used in the facility, and for determining and conducting necessary training.

When instructions or procedures contain sign-offs for steps of an activity or they are Use Category 1, they **SHALL** be completed in a step-by-step manner. For any category of procedures where following in a step-by-step manner may not be necessary, the procedure **Should** clearly indicate the steps or sections where this is the case.

If a procedure step cannot or should not be performed as written, or if following the procedure will create an unsafe or noncompliant condition, the performing individual **SHALL** stop, place the system or component in a stable and safe condition, and immediately inform the evolution supervisor and the SM.

Procedures are to be revised in a timely manner if they are found deficient.

Operators may take whatever action is necessary during emergency conditions to place the facility in a safe condition, and to protect equipment, personnel, and public safety without first administering a procedure change.

D. Standing, Operations, and Shift Orders

This section satisfies the requirement in DOE Order 5480.19 for providing timely information and instructions to operators. It establishes Standing Orders, Operations Orders, and Shift Orders.

Standing Orders are documents which provide guidance or direction applicable Sitewide when existing documents do not suffice. Standing Orders are not intended to provide technical direction for operation of specific systems. Standing Orders may be permanent if the nature of the guidance/direction is not appropriate for placement in a manual or procedure.

Operations Orders are either administrative or technical. Administrative Operations Orders may be effective for twenty-four (24) months, and contain information about operations, administrative matters, work priorities, and matters of a similar nature. Administrative Operations Orders which contain information intended to be permanent **Should** be incorporated into administrative procedures or instructions. Technical Operations Orders may direct manipulation of systems or prescribe requirements which affect technical matters. Technical Operations Orders receive the same reviews as procedures. This meets the procedure approval requirements of DOE Order 5480.19. Therefore, Technical Operations Orders are equivalent to procedures, and may be effective for thirty-six (36) months. Interim Technical Operations Orders can be effective for sixty (60) days.

Shift Orders may be effective for thirty (30) days and are similar to Administrative Operations Orders in that they address the same kinds of topics, but they serve as a means for operations management to quickly communicate short-term information and administrative instructions to operations personnel.

When promulgating Shift Orders and Operations Orders, the FM is responsible to provide for training or required reading for affected personnel.

Since Standing Orders, Operations Orders and Shift Orders are widely available, they **Should** be reviewed for classification prior to promulgation, if appropriate.

(1) Standing Orders

Standing Orders are prepared using the format of Appendix 12.

Standing Orders are approved by the IMC Chief Operating Officer, the Vice President of Nuclear Operations, the Vice President of Safeguards, Security, Site Operations and Integration, the Vice President of Closure Projects Integration, or the Vice President of Safety Systems and Engineering as appropriate for the subject.

The Vice President of Nuclear Operations designates a Principal Standing Order Administrator (PSOA). This individual normally will be an employee of the Site Conduct of Operations Program Manager. The PSOA identifies copyholders for Standing Orders. The Shift Superintendent will be one of the copyholders for Standing Orders.

When the need for promulgating a Standing Order has been identified, the Responsible Manager writes the Standing Order.

Standing Orders which specify how technical requirements are met, affect activity or work in nuclear facilities, involve Site work that could affect a nuclear facility, or involve worker safety, public safety, or the environment may require Independent Safety Review. Accordingly, the Responsible Manager consults 1-52000-ADM-02.01, Operations Review Requirements to determine if the Standing Order requires Independent Safety Review. If review is required, review evidence is maintained by the PSOA in the history file.

The Responsible Manager responsibilities are to:

- review the draft with the General Counsel for concurrence

- consult 1-52000-ADM-02.01 as indicated above if necessary

- determine which organizations/individuals need to review the Standing Order prior to issue

- obtain the approval signature

- assign an effective date that accounts for distribution, training, and implementation if necessary

- determine training and/or implementation actions if necessary

- assign an expiration date up through thirty-six (36) months from the effective date unless the approval authority authorizes a longer effective period. The approval authority may authorize the Standing Order to be permanent, in which case "permanent" is entered in the Expiration Date

- provide the approved Standing Order to the PSOA for processing and distribution through Document Control

- oversee distribution to the Shift Superintendent and affected organizations, and through Document Control in a time frame relevant to its urgency

- initiate extensions and revisions if necessary. Revisions are prepared following the same steps for new ones

The PSOA **SHALL**:

- maintain a Standing Orders Manual and Standing Orders History File in accordance with MAN-001-SDRM (this is in addition to the file maintained in Document Control)

- provide Standing Order sequential numbers

- file the master copy of Standing Orders in the Standing Orders Manual, and a copy in the two history files

- ensure distribution of the Standing Order through Document Control in accordance with MAN-001-SDRM, Controlled Distribution section

When a Standing Order is to be canceled, the PSOA **SHALL**:

- obtain Responsible Manager concurrence, provide a copy to the approval authority who approved the Standing Order with a diagonal line across the title page labeled CANCELED and a space for signature and date of the approval authority, and obtain his/her signature

- update the Table of Contents in the Standing Orders Manual to reflect the cancellation and date of the cancellation

- provide a revised Table of Contents of the Standing Orders Manual to Document Control for distribution

- place the master copy of the canceled Standing Order in the two Standing Orders History Files. The PSOA marks it with a diagonal line and the word CANCELED, and attaches the approval authority's signed cancellation copy to the master

For Standing Orders requiring revision or extension, the PSOA **SHALL**:

- revise the Standing Orders Manual Table of Contents to reflect the revision or extension, and the date

- provide the revised Table of Contents and the revised or extended Standing Order to Document Control for distribution

- update the history files

The PSOA **SHALL** review Standing Orders monthly to identify those Standing Orders which will soon expire, and have the Responsible Managers determine if expiration, cancellation, or extension is appropriate.

(2) Operations Orders

The Facility Manager **SHALL**:

- designate a Shift Order Administrator (SOA) to maintain the organization's Standing Orders Manual, and to administer the Shift and Operations Orders Manual and the Operations Orders and Shift Orders History Files, and designate copyholders

- designate qualified staff member(s) to review proposed Interim Operations Orders if reviewed by staff other than qualified SM and STA, or the Engineering Manager for the facility

- evaluate the need for an Operations Order using Appendix 13 and designate the type, and have it prepared using the format in Appendix 14

- review 1-52000-ADM-02.01, Operations Review Requirements, to determine if Independent Safety Review is required. Submit for review if required

- complete Appendix 13 to determine if an Operations Order is Administrative, Technical, or Interim Technical

- have Technical Operations Orders in nuclear facilities be USQ Safety Evaluation screened

- resolve review comments

- for Operations Orders intended to be a temporary document pending replacement by procedure, check the Convert-to-Procedure box on the Operations Order; otherwise, mark N/A in the Date and Assigned Manager sections

- based on the Appendix 13 evaluation, for Operations Orders determined to be Technical, check the Technical box in the Category section on the Operations Order, and determine if the need for the Order is urgent enough that it be implemented before the review cycle is completed

- for Operations Orders determined to be Administrative, check the Administrative box in the Category section on the Operations Order

- list the groups required to read the Operations Order in the Required Reading line provided

- approve Operations Orders by signing/dating in the "Approved by" section

NOTE

Situations requiring urgent action through an Interim Technical Operations Order to mediate concerns, such as safety, criticality, safeguards, or security, require coordination with the appropriate disciplines

- for Technical Operations Orders urgently needed:

  - mark yes in the Interim Operations Order box in the Categorization section

  - check the Interim box in the Category section on the Operations Order

- assign a qualified member of the facility to review the Order as indicated above. If procedural steps are part of the Operations Order, the review includes validation that it can be performed as written

- ensure that coordination is established with representatives of disciplines in accordance with Appendix 13, who are responsible for the areas that address the subject matter affected by the Interim Technical Operations Order

The Qualified Staff Member **SHALL**:

- review the Operations Order for technical content and for possible conflict with existing requirements, and resolve discrepancies if necessary

- conduct a validation if applicable. Validation requirements are in MAN-001-SDRM

- sign Appendix 13

The Facility Manager or Designee **SHALL**:

- review and approve by signing Appendix 13 and the Operations Order (telecon approval may be obtained and the SM may sign for the FM)

- assign an effective date

- enter a date in the Expiration Date blank on the Operations Order

- provide a copy of the Interim Technical Operations Order to the following disciplines within twenty-four (24) hours of issue:

  - for non-nuclear safety related Interim Technical Operations Orders:

» Industrial Hygiene and Safety (only required for non-nuclear safety issues)

» Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager)

- for Interim Technical Operations Orders that may affect the Authorization Basis or nuclear systems:

» Criticality Safety

» Radiological Safety

» Nuclear Safety

» Safeguards and Security

» Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager)

- submit the Interim Technical Operations Order for Independent Safety Review the next working day

- for Operations Orders not urgently needed, mark *NO* in the Interim Operations Order box on the Appendix 13 checklist Categorization section

- determine the organizations to review the order

- assemble the review packages with the contents to include:

  - transmittal notice, including the date for comment return

  - draft of the Operations Order

- blank Review Comment Sheets from MAN-001-SDRM

- route the Operations Order to the following disciplines for parallel review and concurrence:

  - for non-nuclear safety related Technical Operations Orders:

    » Industrial Hygiene and Safety (only required for non-nuclear safety issues)

    » Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager

  - for Technical Operations Orders that may affect the Authorization Basis or nuclear systems:

    » Criticality Safety

    » Radiological Safety

    » Nuclear Safety

    » Safeguards and Security

    » Engineering (technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager)

- based on the checklist evaluation, if additional parallel review is required, route the Order to those additional disciplines for their review

The Operations Order **Should** be reviewed in a timely manner, that is, within five (5) working days from receipt of the draft until return to the Facility Manager.

Telecon approvals may be obtained during the comment resolution process, and recorded on the Review Comment Sheets.

The SOA **SHALL**:

- develop and maintain a Shift and Operations Orders Manual, and Operations Orders and Shift Orders History Files in accordance with MAN-001-SDRM requirements

- file the master copy of the Operations Order in the Shift and Operations Orders Manual and place a copy in the history file

- issue copies of the Operations Order and the revised Table of Contents to copyholders

When an Operations Order is to be canceled, the SOA **SHALL**:

- provide the master copy to the FM with any supporting documentation relevant to the cancellation, with a diagonal line across the title page labeled CANCELLED, with a space for date and FM signature, and obtain the FM signature

- revise the Shift and Operations Orders Manual Table of Contents to reflect the cancellation and date of the cancellation. This may be done by drawing a line through the entry and signing/dating the line

- distribute a revised Table of Contents to the copyholders of Shift and Operations Orders Manuals. This serves as notification for copyholders to discard the canceled Operations Order

- file the canceled Operations Order in the Operations Order history file

If an Operations Order requires extension, the SOA:

- reports need for extension to the FM and obtains concurrence to extend
- annotates the extension on the front of the Operations Order, and initials and dates the annotation
- revises the Table of Contents with the new expiration date. This may be done in pen/ink
- distributes copies of the revised Table of Contents and Operations Order to copyholders
- places a copy, annotated with the reason for extension, in the Operations Orders history file

If an Operations Order requires revision, the SOA:

- for intent changes, obtains a rewrite of the Operations Order from the FM. For non-intent or editorial changes, corrections may be made in accordance with MAN-001-SDRM, Site Documents Requirements Manual, or Company specific procedures
- prepares and issues the revised Operations Order using the guidance above for processing a new Operations Order, including assigning a new expiration date
- revises the Shift and Operations Orders Manual Table of Contents to reflect the revision and revision date
- distributes the revised Table of Contents and the Operations Order revision to the copyholders. This serves as notification for the copyholders to discard the superseded copies

- places the revised Order in the Operations Orders history file

The SOA **SHALL** review the Shift and Operations Orders Manual monthly to identify those Operations Orders that are due to expire in the following month, and submit Orders about to expire to the FM to review for extension or cancellation

(3) Shift Orders

The FM, SM, or other manager responsibilities are to:

- prepare the Shift Order using the format in Appendix 15, Shift Order Format. The sequential number is obtained from the SOA

- obtain the FM approval signature (telecon approval of the FM may be obtained and if so, the SM signs for the FM indicating telecon approval)

- assign an effective date to the Shift Order allowing for distribution, training, or required reading

- assign an expiration date. The expiration date for a Shift Order may be up through thirty (30) days from the effective date

- provide the Shift Order to the SOA for processing and distribution

The SOA responsibilities are to:

- file the master copy of the Shift Order in the Shift and Operations Orders Manual, and a copy in the history file

- revise the Table of Contents

- issue copies of the Shift Order and the revised Table of Contents to copyholders
- place copies in Required Reading as directed

When a Shift Order is to be canceled, the SOA **SHALL**:

- submit the Shift Order to the FM for cancellation with a diagonal line across the title page labeled CANCELED and a space for FM signature and date
- revise the Shift and Operations Orders Manual Table of Contents to reflect the cancellation and date of the cancellation. This may be done by drawing a line through the entry and signing/dating the line
- distribute a revised Table of Contents to the copyholders of Shift and Operations Orders Manuals. This serves as notification for copyholders to discard the canceled Shift Order
- place the canceled Shift Order in the history file, and in Required Reading

When a Shift Order requires revision, the SOA **SHALL**:

- obtain a rewrite of the Shift Order from the FM or applicable manager
- prepare and issue the revised Shift Order using the steps above for processing a new Shift Order
- revise the Shift and Operations Orders Manual Table of Contents to reflect the revision and revision date. This may be done in pen/ink
- place a copy in the history file

- distribute the revised Table of Contents and the revised Shift Order to the copyholders. This serves as notification for copyholders to discard the superseded copies

- place copies in Required Reading as directed

When a Shift Order requires extension, it is processed and issued as above under the same order number but with a new revision number and a new expiration date.

The SM **SHALL**:

- review Shift Orders regularly to determine the need for cancellation or extension, and notify the SOA to take action if necessary

(4) Records

The following Quality Assurance Records are generated by this section. These Quality Assurance Records **SHALL** be maintained by the SOA in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources, for two years:

- Operations Order Evaluation Checklists

- Standing Order History Files

- Operations Order History Files

- Shift Order History Files

After 2 years, disposition the records in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

E. Control and Use of Operator Aids

Operator Aids are postings which contain information that will assist personnel in performing their duties. Operator Aids may be pages or sections excerpted from procedures, system drawings, data tables, graphs, or other information. Where standard signs (such as radiological postings and signs provided in the HSP Manual, or CSOL/NMSL postings) are provided by other systems, they are not included in the Operator Aid controls described in this Section. Operator Aids may be requested by anyone, are authorized by the SM, and maintained current. They may not alter or conflict with approved procedures, and are not to be used in lieu of procedures. The use of Operator Aids **Should** be held to a minimum.

The SM **Should** ensure the following:

- that operator aid postings do not obstruct instruments, panels, or equipment operations, and are securely fastened to the wall, door, or equipment

- that operator aid postings are protected by lamination or a clear plastic cover when possible

- that postings are logged in the Operator Aid Postings Log which includes the sequential log number, posting information, location (list <u>all</u> locations), approval initials/date, and reference documents. A sample Operator Aid Postings Log is included in Appendix 16

- that when postings are removed, the removal is indicated in the Operator Aid Postings Log by drawing a line through the line entry for the posting and that the SM initials/dates the line and enters the words "removed"

The SM responsibilities are to:

- approve postings

- assign a staff individual to review the postings each quarter to confirm that the postings are still needed and are correct. The review is to include that the Operator Aids are still posted in accordance with the Operator Aid Postings Log. Operator Aids no longer needed should be removed

- document that the review was conducted in the Operator Aid Postings Log on the next blank line of the index

F. Communications

Communications need to be reliable in providing accurate transmission of information for conducting operations activities. Operations and support personnel **SHALL** communicate formally and use standardized terminology, including the Phonetic Alphabet, in communications in order to achieve accurate exchange of information or direction. Communications need to be distinct, deliberate, clear, and concise. These communications can be in the form of:

- written, such as
  - procedures
  - Standing, Shift, Operations Orders
- verbal, such as
  - telephone
  - radio
  - life safety/disaster warning (LS/DW) system

- face-to-face

- hand signals and gestures

(1) Verbal Communications

When communicating in an operational setting, the Phonetic Alphabet is used except when referencing a common acronym such as OSR, LCO, or RCT. The Phonetic Alphabet is included in Appendix 17, along with communications prowords. Operational Communications include information such as:

- who is giving the direction

- who is to perform the action

- what is to be done and why

- when and where it is to be done

- what procedure to use, if applicable

Operators acknowledge directions involving the operation of equipment and systems by repeating back as necessary to ensure the originator's communication is correctly understood. The recipient asks the originator to repeat or rephrase unclear communications. The proword "say again", is used for this purpose.

If the recipient repeats or paraphrases the communication incorrectly, the originator immediately corrects the recipient by saying, "wrong", and then repeats the communication.

The originator of a communication giving direction **Should** observe indicators such as level and differential pressure to confirm that actions of the recipient were accomplished correctly, when this is possible.

In verbal communications, operators use the standard Phonetic Alphabet and prowords provided in Appendix 17. Words that might be mistaken for another, such as "increase/decrease" should be avoided. "Raise/lower" would be clearer.

In radio communications, operators use the standard format: call-up the recipient by name or title, identify the originator's name or title, and transmit the message. Note that once communications have been established, subsequent transmissions can eliminate call-up.

The following are examples of proper communications:

"Shift Manager, this is the Evolution Supervisor, over"

(Initial call-up to establish communications. This ensures that the communications link is established before more lengthy transmissions are made).

"This is the Shift Manager, over"

(The SM responds in the shortened format, not using the call-up of the Evolution Supervisor, because he/she knows that the Evolution Supervisor is on line waiting for this transmission).

"This is the Evolution Supervisor, request permission to conduct Section 7.3 of the drain procedure for Tank D1102, over"

(Note that the Evolution supervisor would use the Phonetic Alphabet and clarify the tank numbers when naming the tank by saying, "Tank Delta One One Zero Two).

"This is the Shift Manager, wait, out"

(The SM uses "wait" to indicate that the response will come back after a delay. If enough time elapses before the reply can be made, the SM **Should** call-up the Evolution Supervisor by title to alert him/her to the transmission).

"Evolution Supervisor, this is the Shift Manager, conduct Section 7.3 of the drain procedure on Tank D1102, over"

(Note that the SM does not say, "permission granted". Making the reply a direct order clarifies the exchange. Also, repeating the procedure paragraph number and the tank phonetically clarifies the order).

"This is the Evolution Supervisor, roger, conduct Section 7.3 of the drain procedure on Tank D1102, out"

(Note that the Evolution Supervisor repeats the order back for clarity, and ends the transmission with "out" vice "over", because he does not need confirmation that the SM heard the response. The SM will call-up again if it is unclear that the order was understood).

If the request to the SM had been misunderstood, the exchange would have gone like this:

"This is the Evolution Supervisor, request permission to conduct Section 7.3 of the drain procedure on Tank D1102, over"

"This is the Shift Manager, conduct Section 7.3 of the drain procedure on Tank D1103, over"

"This is the Evolution Supervisor, wrong, request permission to conduct Section 7.3 on Tank D1102, over"

"This is the Shift Manager, conduct Section 7.3 on Tank D1102, over"

"This is the Evolution Supervisor, roger, out"

If the SM had caught the error during the transmission, he/she could have used the proword "correction" as follows:

This is the Shift Manager, conduct Section 7.3 of the drain procedure on Tank D1103, correction, Tank D1102, over

(2) Emergency Communications

When reporting emergencies and other occurrences:

- clear a telephone line or radio channel for priority communications by using the phase, *"silence on the line, this is an emergency"*
- speak deliberately and distinctly
- identify who you are and your location
- describe the nature, severity, and location of the problem, for example:
  - fire: is there flame/smoke? What is on fire? Where?
  - medical: is the patient conscious/breathing/bleeding/contaminated? Location of patient
  - HazMat: name of chemical or hazardous material if known. Liquid? Gas? Quantity?

- Keep communication lines open

(3) Hand Signals

Hand signals and gestures are to be used only when the operating environment prohibits voice communication. Hand signals are used in accordance with accepted industry standards and are to be discussed and understood prior to task performance. Standard hand signals for several crane types are in ANSI/ASME B30, for example.

(4) Life Safety/Disaster Warning (LS/DW) System

Facility Management **Should** minimize use of the LS/DW System; use is by authorized personnel for emergency and other essential communications.

When using the LS/DW System:

- the LS/DW System has priority to override other users in the event of an emergency announcement in accordance with the following priority:
  - criticality alarm
  - building announcement
  - Site announcement
- when working in areas where the LS/DW System or emergency alarms cannot be heard, alternate methods of communications are used such as beacons, strobes, vibrating pagers, radio headsets, or positioning persons where alarms are audible to communicate with those in the area without adequate coverage. There may also be requirements associated with this in facility Authorization Bases

Communications equipment **Should** be maintained and tested prior to use to ensure proper functioning.

Operations and support personnel **Should**:

- test emergency communications equipment periodically
- ensure that sufficient radios are maintained to be available for emergency response
- rotate radio batteries in a manner to ensure that radios will be capable of use when needed

(5) Notifications

The FM provides the following notification guidance in an Administrative Operations Order or procedure:

- what events require notifications to be made
- who is responsible for making notifications
- identification of primary and alternate personnel to be notified for various situations (names, telephone numbers and pager numbers)
- notification timeliness requirements
- documentation required of notifications

G. Logs and Round Sheets

(1) Logs - Description and Purpose

Logs are formal records of the day-to-day operations of a facility. For consistency and ease of use, logs are titled on the outside, have sequentially numbered pages, and horizontally ruled pages. In order to promote completeness and accuracy, information **Should** be promptly recorded in logs. Logs are used to record the following types of information:

- major events and activities
- major equipment status changes
- major system and equipment testing
- personnel accidents and injuries
- initiation and completion of actions taken as a result of an out-of-tolerance condition
- potentially reportable occurrences and reportable occurrences
- implementation of the Emergency Plan
- signatures of off-going personnel documenting shift relief and turnover
- abnormal facility configurations
- initiation and completion of surveillances which are of a periodicity (frequency) of a month or greater
- security incidents
- the fact that shiftly, daily, and weekly surveillances have been completed

- other items as required by the FM

Computerized narrative logs may be used for making the necessary entries as occurring. In this case, the log will be printed out at end of shift and maintained in a binder which identifies the log title. Shift relief and turnover **SHALL** be signed on this hard copy.

(2) Round Sheets - Description and Purpose

Round sheets are controlled and used by operations personnel to collect data, record equipment status, and note unusual conditions. The FM of the organization responsible for the performance of the rounds **SHALL** approve the information to be included on the round sheet. Appendix 18 contains parts of a sample round sheet, and Appendix 19 lists typical observations that are made when conducting rounds. Round sheets include information such as the following where applicable:

- system or equipment name
- equipment listed in a logical order, such as the sequence encountered in a normal round
- component identification number if necessary for accurate identification
- parameters observed such as:
  - voltage
  - current
  - pressure
  - flow
  - temperature

- Equipment status including:
  - operating
  - standby
  - shutdown
  - out-of-service or out-of-commission
- maximum, minimum, normal values, or expected readings of key parameters as appropriate
- a section to write comments for information gathered during the performance of the round. Comments may include items listed in Appendix 19 such as equipment vibration, excessive temperature, unusual noise or smell, and documentation of supervision notification

(3) Requirements for Logs and Round Sheets

The FM **SHALL** determine the logs and round sheets used in the facility. Logs used in the facility include the following where applicable:

- narrative logs
  - Shift Manager
  - Shift Technical Advisor
  - Stationary Operating Engineer
  - Radiological Operations
  - Mission Program Activity Evolution Supervisor if required by project plans
  - others, such as fire watch, and IWCP emergency repair as required

- administrative logs

  - Lockout/Tagout Permit Log
  - Alarm Deactivation Log
  - Operator Aid Postings Log
  - Temporary Modification Log

The FM **SHALL** maintain an Operations Order or procedure listing the required logs and round sheets for the facility. For nuclear facilities, the logs and round sheets specified in the Authorization Basis are also maintained. The content of round sheets is approved by the FM by approval of the promulgating Operations Order or procedure.

The FM specifies frequency of tours (rounds) associated with each watch position or required round sheet. Regulatory requirements (RCRA), radiological concerns (ALARA), equipment conditions, or AB requirements may influence tour frequency.

Prior to implementing the use of computerized narrative logs, the FM:

- considers the handling and security of the recorded data
- establishes requirements for computerized narrative logkeeping commensurate with the controls applied to manual logkeeping
- provides guidance for log corrections, late entries, supervisory review of log entries, and future changes once approved by supervision

Log keeping requirements are:

- entries are to be recorded promptly
- entries are to be complete and legible

- entries are to be consecutive
- late entries are to be noted as such
- each day is started on a new page
- entries are prefaced with the time in 24-hour time format
- entries are made in black ink
- if more than two blank lines are left between entries, a diagonal line **Should** be drawn between the entries

Round sheets and rounds requirements are:

- round sheets are utilized shiftly to document major equipment operating status, and **SHALL** cover a twenty-four (24) hour period
- round sheets in use **SHALL** be of the current revision
- entries are made in black ink
- for round sheets, abnormal readings or out-of-tolerance conditions are circled in red ink. Abnormal conditions are explained in the comments section, including action taken. Abnormal conditions for operable equipment are to be reported to the Shift Manager
- when performing rounds, an inspection of the assigned areas is conducted using Appendix 19 as a guide

Log and round sheet errors are corrected by drawing a single line through the entry and initialing and dating. Correct information is then entered, near the original entry, if possible. Correction fluid, correction tape or erasures are not to be used. When the individual making an original entry is not available, management may correct logs and round sheets by entering the manager's signature, date, and time.

Completed logs and round sheets are retained for one year in a location of determined by the Facility Manager. After a year, disposition in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources.

(4) Log and Round Sheet Reviews

Operators returning from a period of absence review logs and round sheets as indicated in the section on Shift Relief and Turnover.

The SM **SHALL** review SOE and Radiological Operations (if appropriate) logs and round sheets shiftly.

Foremen **Should** review logs and round sheets each work day for the areas under their cognizance. Functional Managers (e.g., Utilities Manager, Operations Manager, Mission Project Team Lead, etc.) **Should** review logs and round sheets for their areas at least weekly. The Facility Manager or designee **Should** review a sample of logs and round sheets weekly.

Log and round sheets are reviewed for unusual, abnormal, or unexpected conditions, and for trends and safety issues.

The reviewer documents the review providing the date, time, signature and title on the log page or round sheet remarks section.

H. Conduct of Operations Assessment and Lessons Learned

Assessment of performance is an integral part of making continual improvement. Management establishes performance goals and objectives which encourage continual improvement in performance, assesses performance, and takes action to achieve goals and objectives. First line supervisors and other managers set expectations for workers, assess performance, and provide feedback about performance relative to expectations. All personnel **Should** make self assessment and improvement a part of their routine.

Conduct of Operations assessments (operations assessments) are a part of the assessment program at RFETS. They are Management Assessments described in the Site Integrated Oversight Manual, 1-MAN-013-SIOM. They also contribute to an effective Integrated Safety Management System program in which safety is enhanced through feedback and improvement. Improvements identified and taken as a result of objective assessment shape the scope of future work, may result in improved productivity, and may help shape controls for that work. Similarly, feeding back lessons learned from Site and Complex incidents are important to continuing improvement. Assessments are conducted by supervisors and other managers in order to directly observe operations activities on a frequent basis. They provide the FM and senior management with objective evaluations of operations practices which identify areas needing improvement, deficiencies, and noteworthy practices.

Development of Lessons Learned is in accordance with 1-MAN-017-LLGR-RM, Site Lessons Learned Generic Implications Requirements Manual. These **Should** be distributed widely and used in training so that all employees obtain the benefit of Lessons Learned.

(1) Assessing Conduct of Operations

The FM responsibilities are to:

- designate maintenance, operations, surveillances and other evolutions to be included for assessment, including periodic assessment of pre-evolution briefings and job-task briefings

- assign managers and first line supervisors to conduct the assessments. Staff personnel/salary personnel may also be assigned to conduct operations assessments periodically in order to assist the manager

- develop an annual schedule of assessments

- develop a schedule of operations assessments quarterly

- periodically conduct operations assessments personally

- promulgate noteworthy practices and positive evaluations to encourage continuing improvement

- ensuring corrective action is taken for identified deficiencies

Assigned personnel prepare for assessments by reviewing procedures and requirements related to the activities to be observed in order to understand the criteria against which to judge performance. Guidance and requirements for preparation for, conduct of, documentation of, and maintenance of records for assessments are contained in the Site Integrated Oversight Manual, 1-MAN-013-SIOM and may also be contained in company specific procedures.

6. INSTRUCTIONS - STAFFING AND TRAINING

A. Staff Requirements

Minimum staffing requirements are determined by the FM as required by applicable facility Authorization Bases, and mission activity program plans. Minimum requirements should include sufficient personnel to ensure AB compliance is maintained. A long-range staffing plan that anticipates losses and turnover is to be maintained by the FM.

B. Overtime Requirements

Sufficient resources (material and personnel) to accomplish tasks should be provided so that excessive overtime is not required in operational facilities. Overtime is minimized to promote a safe work environment and effective manpower utilization. When necessary to work overtime performing safety related functions (e.g., nuclear operations, maintenance on systems and equipment in nuclear facilities, maintenance on systems and equipment which support nuclear facilities, etc.), overtime may be used on a temporary basis within the following guidelines:

- an individual **Should** not be permitted to work more than 16 hours straight, excluding shift turnover

- an individual **Should** not be permitted to work more than 16 hours in any 24 hour period, nor more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period, excluding shift turnover time

- a break of at least 8 hours **Should** be allowed between work periods, including turnover time

- the use of overtime **Should** be considered on an individual basis, and not for the entire staff on a shift

If an individual is to work in excess of 12 continuous hours, his/her duties **Should** be carefully selected. This individual **Should** not be assigned any task that could negatively impact the safe operation of the facility. The FM or manager designated by contractor

management, and equivalent line managers for support organizations, approve individual overtime for the purposes of this section. Other managers may also have to approve overtime for budgetary considerations. Overtime requirements may also be contained in Facility Authorization Bases, in which case, those requirements apply.

- Individuals working overtime are responsible to monitor the nature and amount of their overtime in order not to exceed the guidelines of this section without authorization

C. Training Requirements

Trained and qualified personnel operate facility equipment or systems, except where supervised trainees operate equipment as part of on-shift training. Training programs include initial and continuing components and are established to develop, enhance, and verify the knowledge and skills of individuals who operate, maintain, provide support, supervise, or manage operations. The Training Users Manual (TUM) establishes requirements for implementing training and qualification programs at RFETS. The Training Implementation Matrix (TIM) required by DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities, further defines program requirements in those facilities and identifies positions and tasks which require qualified or certified personnel.

(1) Developing the Facility (Organization) Training Program

The Facility Manager or company staff training organizations responsibilities are to:

- maintain an adequate training staff to administer training and qualification, and develop the necessary training, qualification, and certification programs required to support the facility mission in accordance with the TUM. Nuclear facilities also implement training programmatic attributes specified in their Authorization Basis, and develop and maintain a facility-specific TIM

- develop training appropriate for each project/task required for the facility mission. In all facilities, the training program is developed in compliance with the TUM, and subordinate, company-specific procedures for implementing TUM requirements. The company-specific procedures, such as a company's Training Program Plan, are concurred in by the IMC as provided for in the TUM. For nuclear facilities whose missions make them subject to DOE Order 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities, the training programs also need to meet the requirements of that Order

- incorporate supervisory and management training into the training programs. This is especially important for first line supervisors

(2) Conduct of On-Shift Training

On-shift training (on-the-job training (OJT) for shift and support personnel) is the portion of an individual's qualification program wherein the trainee undergoes hands-on training to gain first hand practical knowledge needed to qualify. It is conducted in the job environment, and involves the trainee operating equipment and systems under the direct, personal supervision of the qualified operator. The qualified operator is also qualified as an on-the-job (OJT) training instructor. Trainees may be assigned non-operational tasks while on shift to assist qualified operators, but they must be directly supervised when operating equipment and recording information in round sheets and logs as indicated below. When trainees are taking part in operations, the number involved is personally controlled by the Evolution Supervisor, who limits trainees to the ratio authorized by the Facility Manager. Consideration should be given to training effectiveness and to the potential for adverse effects on the facility. A maximum limit for the trainee-to-instructor ratio will ensure that the trainee is provided with the most effective instruction and will ensure that the instructor is not distracted by having too many trainees at once. On-shift training requirements are:

- whenever trainees operate equipment, a qualified (OJT) training instructor directly supervises and observes the trainee and is in position to intervene or assume control, if necessary

- OJT training instructors are required to meet the requirements of the RFETS TUM, 96-RF/T&Q-0005, Training and Qualification Program

- until trainees have demonstrated adequate understanding of an operation, trainees are required to discuss the safety cautions and notes, and procedural steps with the (OJT) training instructor prior to performing the operation

- trainees demonstrate actions to be performed by identifying switches, valves, and breakers that are to be manipulated prior to performing the operation

- when trainees record equipment parameters on round sheets or in logs, the (OJT) training instructor verifies that the recorded information is correct by initialing the entry

- the trainee and (OJT) training instructor discuss any out-of-specification readings and the consequences of allowing the condition to continue

- trainees **SHALL** not make independent decisions or take actions that could affect facility safety

- the Evolution Supervisor observes the maximum trainee-to-instructor ratio limit established for facility operation

(3) Abnormal and Emergency Conditions

Trainee operation of equipment **SHALL** be suspended during unanticipated or abnormal events, accident conditions, or when suspension is necessary to ensure safe and reliable facility operation.

During abnormal or emergency conditions, trainees **Should** provide assistance at the discretion of the qualified operator.

(4) Documentation of On-Shift Training

- on-shift training shall be documented in compliance with the RFETS TUM and the subordinate company-specific training procedures

D. Required Reading Program for Operations and Support Organizations

(1) Program Elements

A required reading file **SHALL** be established to ensure individuals are made aware of information that is:

- important to safe and efficient operation of their work station
- important to facility safety
- an applicable occurrence or Lessons Learned
- a change to a procedure or other document affecting systems or equipment operated by facility operations or support personnel

The required reading file contains:

- significant procedure changes, and other relevant document changes
- equipment design changes
- applicable DOE, industry, and RFETS occurrences and lessons learned
- information necessary to keep operations personnel aware of current facility activities
- other information determined by the FM/organization manager

A required reading file **Should** be readily available.

Measures **Should** be established to assign required reading for groups of personnel appropriate to the organization, including:

- required dates for completion of reading based on the nature of the material
- an immediate reading designation for documents to be read before assuming responsibility for a shift position

Documentation of required reading **Should** include:

- initialing and dating by the assigned reader
- retaining documentation of required reading for one year

A required reading file periodic review **Should** be performed by the individual designated by the FM or organization manager to:

- verify assigned reading is being completed

- remove material that has been read by designated personnel from the required reading file. Such material is placed in a reference file. After a year, disposition items in the reference file in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources

7. INSTRUCTIONS - CONTROLLING SYSTEM OPERABILITY

A. Status Control

Good operating practice includes operations personnel knowing the status of equipment and systems. Changes in major equipment and system operation/configuration need to be communicated shift to shift through shift relief and turnover and by maintaining accurate status, whether on status boards or computer displays. Maintaining accurate status is a key element of operations formality. Changes in equipment and component status will occur regularly in operational facilities. Many will be related to deficiencies which result in placing items out-of-service for repair. Many will be due to placing items back in service. Others include component and system start-up, shutdown, and termination and suspension of operations in accordance with Section 7.G. requirements, etc.

There may also be instances when facility management desires to temporarily discontinue, temporarily halt, stop, or curtail an operational activity which does not involve suspension or termination as specified in Section 7.G. In these instances, the SM **SHALL** clearly identify the status of the activity in the SM log and on status displays. Included in the SM log entry will be the boundaries, controls established, specification of what can/cannot be conducted in the affected area, postings needed, and the requirements to return to former status. Documentation of actions accomplished to return to the former status, and the status change declaration, **SHALL** be entered in the SM log.

System status displays are used as an accurate portrayal of building Safety Structures, Systems, and Components (Safety SSC) status and other systems, and as an aid for making operational decisions based on understanding current status. Status displays **SHALL** contain as a minimum the Safety SSC for which LCOs are specified in the Authorization Basis, and **Should** contain other systems with defense in depth, regulatory, and personal safety significance as determined by the FM. In facilities without Safety SSC, the FM determines the appropriate systems and components to be included on status displays. Facilities with Breathing Air Systems and Effluent Monitoring Systems **Should** have these included in status.

(1) Establishing Status Displays

The FM promulgates an Administrative Operations Order or procedure which:

- determines which status displays are to be maintained based on the above requirements
- approves items to be included on the displays
- approves status display locations
- approves the design of the status displays
- designates individuals authorized to update status displays if other than the SM, STA, SM's assistants, SOEs, or Radiological Operations foremen

(2) Use of Status Displays

The SM and other work stations maintaining status **SHALL**:

- ensure that status displays are maintained current

- ensure that the status displays are used as part of information transfer when SMs, SOEs and others required by the FM perform shift relief and turnover

(3) System Component Lineups

For systems continually in operation, component alignment checklists are not maintained on file unless required by the FM. For systems being regularly started-up and shut-down, the procedure used for the operation provides for start-up prerequisite actions, and component positioning for both start-up and shut-down.

B. Configuration Control

Configuration Control at RFETS is invoked by the Conduct of Engineering Manual, 1-V51-COEM-DES-210, Design Process Requirements, or its replacement Site Engineering Requirements Manual (SERM), MAN-027-SERM. It provides a process for controlling changes to the configuration of facilities, systems, processes, safety related software, and Site grounds.

C. Compliance Tracking

This section describes the system to be used for tracking and documenting Limiting Conditions for Operation (LCO) surveillances and Authorization Basis (AB) compliance-related compensatory measures associated with Unreviewed Safety Question Determinations (USQD), Engineering Operability Evaluations (EOE), and Justifications for Continued Operations (JCO). Planned Out-of-Tolerance activities are not covered by this section. The system may be used to track compliance with Administrative Control Requirements (ACR) in BIO/BFO.

Often, when system or equipment deficiencies or out-of-tolerance conditions exist, engineering and nuclear safety documents are prepared to provide information about the operability status of the system/equipment. Compensatory measures are sometimes specified. These compensatory measures are required to be met in order to maintain Authorization Basis compliance. Therefore, tracking to ensure compliance is necessary.

(1) Compliance Tracking System

The FM designates a Compliance Tracking Coordinator (CTC).

The FM designates a qualified individual (SM/STA/CCA/Engineering Manager) to assess the Compliance Tracking System periodically to ensure compliance. This **Should** be accomplished as part of the facility Management Assessment Program.

The CTC responsibilities are to:

- maintain the Compliance Tracking System accurate and up-to-date so the FM and SM can have immediate access to the status of all items tracked. This includes tracking expiration dates of EOE, JCO, USQ, and USQDs, and initiating action with the Engineering Manager, AB Manager, and FM in time to achieve extensions, if necessary

- report status to the SM at a periodicity designated by the FM

- update the Compliance Tracking System when changes are made to LCO surveillance requirements or compensatory measures contained in an EOE, JCO, or USQ, USQD, or when a Compliance Tracking Form is received from the performing organization following satisfactory completion of a surveillance

(2) Scheduling of LCO Surveillances or Compensatory Measures

The CTC **SHALL**:

- enter performance intervals for compensatory measures and LCO surveillances into the Compliance Tracking System

- track the status of LCO surveillances and compensatory measures using the Compliance Tracking System

- use Appendix 20, Surveillance Intervals, to determine the times and dates when LCO surveillances and compensatory measures are due, unless otherwise specified in the facility Authorization Basis

- establish the due date/time for surveillances and compensatory measures

- schedule performance of the compensatory measures and surveillances accordingly

- for upcoming surveillances or compensatory measures not performed on a regular short-term basis (once per shift, day, or week) notify the performing organizations sufficiently in advance so they can conduct the surveillance/compensatory measure on time

- immediately notify the SM, FM, and the manager of the performing organization if it appears an upcoming surveillance or compensatory measure may be missed

- immediately notify the SM, FM and other cognizant managers of an overdue surveillance or compensatory measure

- ensure surveillances and compensatory measures are scheduled on the POD

- create Compliance Tracking Forms for surveillances and compensatory measures using Appendix 21 as a guide

The performing organization **SHALL**:

- determine the lead time, depending on the workload and allowance for performance, and schedule the surveillance/compensatory measure so it will be performed on time

- submit upcoming LCO surveillances and compensatory measures for entry on the POD

(3) Compensatory Measure Actions

When an approved document (EOE, JCO, or USQ/USQD) with required compensatory measures is received, the FM **SHALL** take the following actions:

- implement the compensatory measures using a Technical Operations Order

- inform the CTC that the approved document requiring compensatory measure actions has been received and is being implemented. Discuss the document and the compensatory measures with the CTC and provide the CTC with a copy of the approved document, and the implementing Operations Order

The CTC **SHALL** notify the performing organization of their compensatory measure actions, and **SHALL** update the Compliance Tracking System by entering the following:

- the approved document and its reference number

- the Technical Operations Order by which the compensatory measure is accomplished

- the performing organization

- the frequency of performance

- the date compensatory measures are initiated
- the next due date
- the expiration date for the applicable documents and the Technical Operations Order

(4) Performance of Scheduled Surveillances and Compensatory Measures

The performing organization **SHALL**:

- perform LCO surveillances and compensatory measures on time as scheduled on the POD in accordance with current revisions of approved procedures. The individual performing the work has the responsibility to ensure that the procedure being used is current
- report completion of LCO surveillances and compensatory measures to the SM as occurring
- use the Compliance Tracking Form to document the performance of LCO surveillances or compensatory measures
- when problems or deficiencies are encountered, or LCO surveillances or compensatory measures are not completed within the required time interval, or the acceptance criteria are not met, immediately notify the SM

The SM **SHALL**:

- when notified that an LCO surveillance or compensatory measure is not performed within the required time interval, or the acceptance criteria are not met, takes the following actions:

- declares the system, component, or equipment inoperable if required by the Authorization Basis
- notifies the FM
- immediately initiates required/remedial actions
- updates System Status and the SM log
- reviews the event to determine the cause of the out-of-tolerance condition or violation
- reports the event in accordance with 1-D97-ADM-16.01, Occurrence Reporting Process
- notifies the DOE Facility Representative and the IMC Representative for the facility

(5) Documentation and Tracking System Update

The performing organization **SHALL**:

- upon completion of LCO surveillances or compensatory measure actions, complete the Compliance Tracking Form sheet(s) generated during the surveillance/compensatory measure and return the sheet(s) and originals of data to the SM for review

The SM **SHALL**:

- review the Compliance Tracking Form and attached data sheets for completeness, and to determine if deficiencies were identified and documented adequately. Initiate actions if required based on the results of the surveillance/compensatory measure
- sign and return the form to the CTC

The CTC **SHALL**:

- review the form for completeness and sign the Compliance Tracking Form

- update the Compliance Tracking System to reflect the surveillance/compensatory measure performance

(6) Closure of EOEs, JCOs, and USQ/USQD

The FM or designated manager (Authorization Basis Manager, Engineering Manager) responsibilities are to:

- determine that a system, component, or equipment is operable in accordance with Section 7.G. of this Manual, or that the conditions which initiated the EOE, JCO, or USQ/USQD no longer exist

- notify Engineering, including IMC Nuclear Engineering, Nuclear Safety, and Criticality Safety in writing that applicable EOEs, JCOs, or USQ/USQDs are no longer required so that the Authorization Basis Document List for the facility can be kept current

- notify the CTC of this in writing and specify discontinuation of performing and tracking applicable surveillances or compensatory measures

- notify the DOE Facility Representative, and the Engineer of the IMC organization that oversights the facility so that the DOE, RFFO Authorization Basis Division can be informed

The CTC **SHALL** update the Compliance Tracking System accordingly, and notify the performing organization of the change.

(7) Records

Compliance Tracking Forms generated by this procedure are Quality Records.

The CTC:

- maintains the original Compliance Tracking Form and attached data sheets for two (2) years

- after two years, dispositions the records in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources

D. Lockout/Tagout (LO/TO), Caution Tag, and Information Tag Requirements

The LO/TO program provides administrative control to protect personnel from injury, protect equipment from damage, ensure operation of items only by authorized personnel in a controlled fashion when necessary, and to maintain integrity of physical boundaries of facility systems. LO/TO is implemented in accordance with 1-15320-HSP-2.08, Lockout/Tagout.

Caution Tags are used as a precautionary measure to provide temporary special instruction or to mandate that greater than normal caution should be exercised to operate equipment.

Information Tags are used to provide explanatory information about a component or system. The information is not essential to safe operation and is of less significance than information provided on a Caution Tag.

Both the Caution and Information Tag systems are optional, and are implemented at the discretion of the FM.

These tags should not be used when a potential for personnel injury or equipment damage exists, or when more appropriate administrative controls are required, such as LO/TO. Caution and Information Tags should not conflict with procedures or vendor technical specifications. The use of Caution Tags is restricted to those situations in which a system or component is functional, but when some precaution or item(s) of information must be conveyed to the operator prior to operation.

(1) Control of Caution/Information Tags

The SM responsibilities, if these tags are used, are to:

- concur that the proposed Caution or Information Tag is needed, that the information on the tag is correct, and that the use of the proposed Caution or Information Tag is appropriate

- ensure that a separate tag log for each system is maintained which provides a unique identifying tag number, the purpose and wording of the special instructions or information on the tag, the location of the posting, and the approval signature. A sample tag log is in Appendix 22. Samples of Caution Tags and Information Tags are in Appendices 23 and 24

- authorize placement and removal of tags

- ensure that quarterly reviews of the Caution and Information tags and logs are conducted by personnel assigned by the FM. The review **Should** verify the continued need and applicability for each tag and ensure that the index accurately reflects all tags

The individual designated by the SM to place tags **Should** ensure that the tag is hung securely in the correct location, without obscuring the instruments, panels, or any existing posting, and is clearly visible to personnel in the area of concern.

Individuals authorized by the SM to place or remove tags:

- complete required tag log entries
- notify affected personnel of the installation or removal of the tag
- place or remove tags

In the event a lost, loose, or damaged tag is identified, ensure that action is taken to replace the tag. The SM concurs with the replacement of tags in these cases.

E. Component Labeling

Clear labeling improves the ability of operations and support personnel to identify system components positively and quickly. Labeling is implemented using a graded approach. Specification, design, and installation requirements for labels are contained in SX-164, Standard for Facility System and Component Identification and Labeling. Labeling deficiencies are corrected in accordance with provisions of the Integrated Work Control Program Manual. Since the Site is in the process of closing, all systems and equipment will not be labeled. Labeling is necessary for the following:

- startup of new systems or processes
- operation of equipment and systems which require LCO surveillance procedures to perform the operations
- other systems and equipment if specified in the applicable Authorization Basis
- other items as determined by the Facility Manager to enhance operations

F. Removing Systems and Equipment from Service

Removal of systems and equipment from service is controlled in order to meet nuclear safety requirements, for personnel safety, to avoid unauthorized operation, and to avoid damage to systems and equipment. Systems may be removed from service for a number of reasons including maintenance, testing, calibration, and surveillances. They may be taken out of commission permanently to facilitate facility deactivation and/or shutdown.

The SM responsibilities are to:

- maintain out-of-service (OOS) and out-of-commission (OOC) status
- authorize changing status to OOS or OOC and removal of equipment from service considering the following:
  - mechanical and electrical lineup changes needed to effect the status change
  - impact of systems or equipment on Authorization Basis requirements
  - use of lockout/tagout to provide the appropriate degree of control
  - documenting action taken in the SM log and other appropriate logs, and updating status

Status of OOS and OOC items will be maintained as determined by the FM. Status for this may be annotated on status boards, status computer printouts, or on lists. When permanently shutting-down whole systems, whole modules, whole rooms, etc., only one OOC entry is required for the system/module/room. Facilities may also elect to enter permanent OOC status into the IWCP inactive database to be printed-out when desired.

G. Termination of Operations Process and Authorization Basis Management

When work commenced in 1990 to update the Site's nuclear facilities' Final Safety Analysis Reports (FSAR), initial effort was devoted to revising the Operational Safety Requirements (OSR) in Buildings 559 and 707. Throughout the 1990's, many page changes were made to nuclear facility FSARs, and in the mid-1990's, development of new authorization basis documents commenced. These are Basis for Interim Operations (BIO), and Basis for Operations (BFO) documents and DOE Order 5480.23 compliant FSARs. One result of implementing new OSRs in Buildings 559 and 707 was development of a process in 1991 for operational and administrative actions to take when operations had to be terminated. This process, over time, developed into what was known for several years as COOP-020, Termination of Operations Process. The COOP-020 Termination of Operations Process was specifically written for FSAR requirements and was the sole source of this direction for FSAR facilities. New ABs incorporate termination requirements but some use the term "SUSPEND OPERATIONS" and others use the term "TERMINATE". This revision covers both the 1980's FSARs, and new AB documents, and continues as the sole source of direction for 1980s FSAR facilities. Facilities with BIO/BFO and DOE Order compliant FSARs follow the administrative process in this section, taking the specified actions called-out in the individual AB where applicable. The provisions of the AB documents prevail if a conflict between this section and the AB is determined to exist.

This section includes the process by which affected operations in a nuclear facility are terminated (or suspended) if required by an OOT condition, or if required by an Operational Safety Requirement/Technical Safety Requirement (OSR/TSR) violation. In addition, it includes a section on management of potential unreviewed safety questions. Also included are instructions for determining the operability of System Category (SC) 1/2 Safety Structures, Systems and Components (Safety SSC), or SC-3 Safety SSCs credited in the Authorization Basis. The definitions of System Categories are contained in the Conduct of Engineering Manual, Section 2-DO3-COEM-DES-223. Finally, this section defines Limiting Conditions for Operation (LCO)-affected operations when FSARS non-compliant with DOE Order 5480.23 are still in effect in facilities. Successful implementation of this Section, and Section 7.C., Compliance Tracking, should result in satisfactory Authorization Basis management.

Compliance with the Authorization Basis must be documented and continually demonstrated. This is fundamental for making operability determinations, managing planned out-of-tolerances (OOTs), and entering or exiting remedial/required actions including termination or suspension of operations. It is an ongoing requirement for Shift Managers to be able to demonstrate that the facility meets AB requirements, Operational Safety Requirements and Technical Safety Requirements (OSR/TSR). In the case of the Building 440 BFO, Operational Controls are complied with in place of OSR/TSR and LCOs. Shift Managers **Should** have readily available the CTC status reports, status of shiftly, daily, and weekly surveillances, technical concerns and EOEs, and equipment/system status information to be able to demonstrate AB compliance.

(1) Basis for Operability for SC-1/2 Safety Structures, Systems and Components (Safety SSC)

The basis for an operability determination must be documented and requires compliance with relevant AB provisions unless otherwise provided for in the AB. If an OOT condition occurs due to a Safety SSC deficient condition, the affected Safety SSC is declared inoperable by the SM and remedial/required actions taken as described in the Authorization Basis. Remedial/required actions continue until the LCO surveillance requirement is met. If necessary to continue routine operations beyond the period permitted by remedial/required actions without meeting the LCO requirement, then a JCO or OSR/TSR page change must be implemented. When action must be taken subsequently to remedy an unsafe or potentially unsafe condition, even in an out-of-tolerance (including terminated/suspended) condition, action is taken to correct the condition in accordance with an approved Technical Operations Order. Controls in the Technical Operations Order **SHALL** be consistent with the applicable OSR/TSR. Verbal notification of the action being taken will be made to the DOE Facility Representative, and a copy of the Technical Operations Order will be provided to the Facility Representative.

Verifying operability on an ongoing basis consists of verification by surveillance that the Safety SSC is able to perform its specified function and that operations are within the specified LCO. To return inoperable items to operable status, an operability determination is conducted to demonstrate the ability of the Safety SSC to perform its specified function.

During routine operations, there are a number of activities conducted which help confirm that operability is being sustained. Examples are:

- conducting a test or a surveillance to resolve technical questions about system or component operability

- conducting walkdowns and tours to observe that components and systems are properly aligned and operating

- observing operational parameters from the control room or during rounds which confirm proper operation of components and systems

If a situation arises which causes Safety SSC operability to be questioned, determination of operability is accomplished using the operability determination process covered below. In the interval between discovery of a situation which causes operability to be questioned, and subsequent resolution of operability status, the SM should take a conservative approach. If the SM has reasonable expectation that the affected Safety SSC is operable and a prompt operability determination will most likely support that expectation, the SM may choose to consider the Safety SSC operable. If the SM is in doubt as to operability status, the SM declares the Safety SSC inoperable and takes remedial/required action as required by the Authorization Basis, pending technical resolution of operability status.

(2) Basis for Operability for Credited SC-3 Safety SSCs

Designated SC-3 Safety SSC are credited in BIO and BFO documents. When there are deficiencies in these, facility management needs to determine if the deficiency adversely affects system function as depicted in administrative controls or its bases, and to take appropriate action. Determining the appropriate action may involve use of the Technical Concern/Engineering Operability Evaluation process discussed later in this section. Similarly, any support systems, equipment, or system deficiency questions needing technical resolution, may be resolved by the Technical Concern/EOE process.

(3) Justification for Continued Operation

In the event that routine operations beyond those allowed by the remedial/required actions of the Authorization Basis are necessary, a JCO is prepared and processed requesting DOE, RFFO approval to continue operations in accordance with 1-R26-NSM-04.06, Justification for Continued Operation (JCO) Preparation. Remedial/required actions remain implemented until DOE, RFFO approval and facility implementation of the JCO. An approved JCO is implemented using a Technical Operations Order.

(4) Termination or Suspension of Operations

When specified in OSR/TSR as remedial/required action, termination or suspension of operations is accomplished. They are implemented by Technical Operations Order. Termination or suspension of operations is often a remedial/required action when a Safety SSC deficiency causes inoperability, when an LCO is not met, or a surveillance requirement specification is not met. In addition, termination or suspension of operations may be specified by AB documents when an OSR/TSR violation occurs. In general, termination or suspension consists of halting the activities and/or operations protected by the deficient Safety SSC, halting other activities if specified in the AB, and commencing corrective actions.

- for FSAR non-compliant with DOE Order 5480.23 OSR/TSR violations, operations are terminated, the violation reported to DOE formally by Occurrence Report,

reported to the DOE Facility Representative, reported to the IMC Representative for the facility, corrective actions taken, and permission to resume operations is formally requested of the IMC

- for BIO/BFO, and DOE Order 5480.23 compliant FSARs, the actions to take for suspensions are indicated in the AB

When action must be taken subsequently to remedy an unsafe or potentially unsafe condition, even in an out-of-tolerance (including terminated/suspended) condition, action is taken to correct the condition in accordance with an approved Technical Operations Order as indicated in Section 7.G.(1) above.

(5) Limiting Conditions for Operations and Surveillance Requirements

Upon discovery of a failure to meet an LCO, the associated remedial/required actions are entered as specified in the applicable Authorization Basis. Compliance with the AB provisions is required during all phases of operations unless specific exemptions are provided in the facility Authorization Basis.

Equipment removed from service or otherwise declared inoperable may be physically operated but credit cannot be taken for meeting AB requirements until declared operable. Conducting maintenance testing, or operating the equipment after maintenance are examples.

When a support system or component is deficient or otherwise not functional, the supported system is not automatically declared inoperable due solely to support system inoperability. For example, in some facilities, the steam system supports ventilation system operability. A steam system deficiency does not automatically render the ventilation system inoperable. Determination of the impact of the support system deficiency on the supported system operability needs to be evaluated by Facility Management using Appendix 25, Technical Concern Assessment Checklist.

In general, measurement devices used to demonstrate compliance with LCOs will be calibrated to Site standards, manufacturer's specifications, and/or industry standards, as applicable. Calibration requirements specified in the Authorization Basis applies.

Surveillance intervals (surveillance frequencies) which are specified in Appendix 20 are met unless different intervals are specified in the facility's Authorization Basis. Intervals provide operational flexibility for conducting surveillances. If the LCO surveillance is not performed within the interval defined in the "not to exceed" interval columns of Appendix 20, the LCO will be declared not met, and the applicable remedial/required actions will be entered.

Specific timeliness requirements which remedial/required actions must meet may be included in the facility Authorization Basis. Unless otherwise specified in the AB, the start time for taking the remedial/required actions begins when information is available to the Facility Manager or Shift Manager that the LCO cannot be met, or when it is discovered that the allowed period for completion of an LCO surveillance has expired. Where no time is specified in Authorization Basis documents, the Shift Manager initiates action to place the facility in a safe condition within thirty (30) minutes.

(6) Planned Out of Tolerance (OOT) Conditions

Unless otherwise specified in a facility's AB, when performance of a planned activity such as maintenance or testing (except for normal LCO surveillances) will result in not complying with Authorization Basis requirements, the following actions are taken by the SM:

- implement the applicable remedial/required actions prior to initiating the activity
- prior to the start of the activity, verbally notify the DOE Facility Representative of the nature of the activity, the systems affected, and the duration of the planned OOT

- record in the Shift Manager's Log:
  - the reason for the planned out-of-tolerance
  - the activity
  - the systems affected and expected duration
  - the time the OOT condition is entered and exited
  - completion of Appendix 26 if applicable

(7) Operability Determination Process

When technical problems or concerns are identified that call into question the operability of a Safety SSC, Facility Management uses Appendix 25, Technical Concern Assessment Checklist, to document the operability determination considering the following:

- the safety function of the affected systems
- the effect of the deficiency on the identified safety functions
- the cumulative effect of other facility conditions on the identified safety functions
- compliance with applicable provisions of the OSR/TSR or other Authorization Basis requirements

When it is clear that the item is operable, that is, questions C.1 through C.3 on Appendix 25 are answered "no", the Shift Manager:

- documents the disposition in Section D of Appendix 25

- continues normal operations and makes the appropriate SM Log entry

Submission of a Technical Concern may result in processing an EOE in accordance with 2-L97-COEM-AMN-163, Engineering Operability Evaluation (EOE) Preparation. The identification of a Technical Concern and request for an EOE is based on a reasonable expectation that the Technical Concern or EOE will conclude that the affected Safety SSC is operable.

When a reasonable expectation does not exist that the affected Safety SSC will be deemed operable, the Shift Manager:

- declares the item inoperable

- initiates remedial/required actions until a formal determination is made or the deficiency is repaired

- makes the appropriate SM Log entry

- updates status and informs managers and facility personnel

If a timeframe for initiating remedial/required actions is not specified in the Authorization Basis, action is initiated within thirty (30) minutes.

The Engineering Manager (or equivalent manager) reviews and signs the Technical Concern Assessment Checklist and initiates the applicable follow-up action.

A file is maintained for checklists and EOEs in the SM office.

(8) Termination of LCO-Affected Operations for Facilities with FSARs that are Non-compliant with DOE Order 5480.23

In the case where remedial/required action requires that LCO-affected operations be terminated, the affected area must be identified. Identification can be accomplished by referring to the AB, the System Evaluation Report (SER), or by processing an EOE if the AB and SER are not specific.

When an item is declared inoperable by the Shift Manager that requires termination, or an OSR/TSR OOT condition occurs requiring termination, or an Authorization Basis violation has occurred, then the SM:

- makes an appropriate SM Log entry and notifies the Facility Manager
- implements the specified remedial/required actions
- updates facility status and informs facility personnel
- reports the condition to DOE as required by 1-D97-ADM-16.01, Occurrence Reporting Process, and notifies the DOE Facility Representative
- reports the condition to other managers as applicable, and the Integrating Management Contractor Representative for the facility

For cases where a timeframe for remedial/required actions is NOT specified in the applicable Authorization Basis document, action is initiated within thirty (30) minutes.

Appendix 27, Material-at-Risk (MAR) is used as a guideline to conservatively define operations allowed in a facility while out of compliance with the Authorization Basis. Facilities whose Authorization Bases (DOE Order 5480.23 compliant) define non-LCO affected operations or prescribe actions for suspension of LCO affected operations **SHALL** follow the prescriptions of the Authorization Basis. For facilities with FSARs not DOE Order 5480.23 compliant, Appendix 27 **SHALL** be used to determine which operations are non-LCO affected.

When required to terminate operations, the SM formally terminates LCO-affected operations by implementing a Technical Operations Order in accordance with Section 5.D., Standing, Operations, and Shift Orders based on the requirements of Appendix 27, Material-at-Risk (MAR) Limits for Non-LCO-affected operations. Non-LCO-affected operations are allowed to continue when documented in the Technical Operations Order.

The Shift Manager **SHALL** determine activities to be continued for the purpose of maintaining a safe facility configuration, weighing public and worker safety risk that may arise from the termination. These activities **SHALL** be identified in the Technical Operations Order. LCO-affected operations may resume upon satisfactory resolution of the OOT condition or declaration of the affected system operable in accordance with the Return to Service and Operability Declaration, Section 7.G.(11).

If routine operations beyond those allowed by the remedial/required actions are deemed necessary before the correction of the deficiency creating the OOT condition, the required actions are:

- request and process a JCO in accordance with 1-R26-NSM-04.06

- continue remedial/required actions during the time of the JCO preparation and DOE, RFFO approval and until implemented

When action must be taken subsequently to remedy an unsafe or potentially unsafe condition, even in an out-of-tolerance (including terminated) condition, action is taken to correct the condition in accordance with an approved Technical Operations Order as indicated in Section 7.G.(1) above..

If a violation of the Authorization Basis resulted, actions required include conducting a Fact Finding meeting to determine cause and corrective actions, correcting the condition which caused the violation, and taking these administrative actions:

- record the following information on Appendix 28, Resumption of LCO-Affected Operations Following an Authorization Basis Violation, to document the request for resumption of operations:

  - date of occurrence
  - applicable occurrence report number(s)
  - description of AB violation
  - immediate actions taken
  - preliminary root cause of the failures leading to the Authorization Basis violation (see MAN-062-CAUSE ANALYSIS, Cause Analysis Requirements Manual)
  - short-term corrective actions that have been taken to prevent recurrence (see 1-97-ADM-16.01, Occurrence Reporting Process)
  - Independent Safety Review of the root cause and implemented short-term corrective actions

- obtain written concurrence from the designated IMC Division Manager to resume operations by sending a cover letter with Appendix 28 and a copy of the Occurrence Notification Report

The IMC Division Manager or designee responsibilities are to:

- verbally notify the DOE, RFFO Facility Representative of the preliminary root cause of the violation, that the violation has been resolved, and that resumption of operations is being authorized by the IMC

- authorize resumption of operations by letter

(9) Administration of BIO/BFO and DOE Order 5480.23 Compliant FSARs TSR Violations

The actions required in response to BIO/BFO violations are specified in the BIO/BFO documents. If a violation occurs, the Shift Manager will take the required actions specified in the AB and:

- document the time and circumstances in the Shift Manager's Log indicating when/what required actions were taken
- document the termination/suspension in a Technical Operations Order if applicable
- notify on-shift personnel and the Facility Manager
- notify the DOE Facility Representative and the IMC Representative for the facility
- report the occurrence to DOE officially by filing an Occurrence Report in accordance with 1-D97-ADM-16.01
- update facility status

When immediate corrective actions have been taken, and the Fact Finding meeting has occurred, a letter with a copy of the Occurrence Notification Report detailing the violation will be sent to the designated IMC Division Manager with:

1. short-term and long-term corrective actions to address the violation, identification of root causes, and the restart plan, or
2. a report identifying the root causes for the violation and the corrective actions taken and to be taken to prevent recurrence within ten calendar days, as specified in the BIO/BFO for the type of violation

In both cases, the letter will state that Independent Safety Review of the root cause was conducted and short-term corrective actions were accomplished.

If required by the AB for the facility, the designated IMC Division Manager will forward Item 1. for DOE approval, and will forward Item 2. to DOE within sixteen calendar days. After DOE approval for Item 1., the designated IMC Division Manager will notify contractor management by letter of DOE approval to restart. If DOE approval is not required by the AB, the IMC Division Manager will approve restart by letter.

(10) Management of Potential Unreviewed Safety Questions

When information is identified which indicates a potential inadequacy of previous safety analyses, or a possible reduction in the margin of safety is identified as defined in the OSR/TSR such that a potential for a positive USQ exists, then the SM **SHALL**:

- document the item in the SM Log
- file the required occurrence report
- take action to place the facility in a safe condition. The safe condition is to be identified by implementing a Technical Operations Order until the Unreviewed Safety Question Determination (USQD) is completed
- notify the DOE Facility Representative, contractor management, the IMC Representative for the facility, and the Facility Manager of the situation
- initiate a request to perform a Safety Evaluation Screen/Unreviewed Safety Question Determination (SES/USQD) in accordance with 1-C10-NSM-04.03, Safety Evaluation Screen, or equivalent contractor or subcontractor procedure

If the Facility Manager cannot support concurrence or notification of the preliminary evaluation of the USQD within the required five working days, the Nuclear Engineering

Manager may submit the evaluation to the IMC without concurrence. Concurrence is then obtained prior to submittal of the final USQD.

The FM **SHALL**:

- ensure that the Nuclear Engineering Manager provides a preliminary evaluation of the potential USQ to the IMC and the DOE/RFFO Assistant Managers of Performance Assessment and Engineering within five working days of discovery

- review and concur with the preliminary evaluation of the potential USQ, and summarize the remedial/required actions taken to place the facility in a safe configuration and the schedule for the completion of the formal USQD

- update the occurrence report as applicable

(11) Return to Service and Operability Declaration

This process is required for Safety SSC and may be used for returning non-Safety SSC to service.

CAUTION

System Return-to-Service and Operability Checklist SHALL be completed before declaring Safety SSC operable after having been inoperable. Applicable remedial/required actions are not exited until the Safety SSC is declared operable

The SM **SHALL**:

- verify satisfactory completion of the necessary work to regain operability such as a Post-Maintenance Test (PMT) in accordance with provisions of the Integrated Work Control Program Manual, or completion of applicable LCO surveillances

- complete the System Return-to-Service and Operability Checklist (Appendix 26)

The FM "noting" return-to-service on Appendix 26 may be obtained verbally in which case the SM signs Appendix 26 for the FM.

(12) Records

The FM maintains the following on file for two years in accordance with 1-V41-RM-001, Records Management guidance for Records Sources:

- Appendix 25, Technical Concern Assessment Checklist

- Appendix 26, System Return to Service and Operability Checklist

After two years, disposition these records in accordance with 1-V41-RM-001 requirements.

The designated IMC Division Manager establishes files in accordance with 1-V41-RM-001 and maintains the original Appendix 28, Resumption of LCO-Affected Operations following an Authorization Basis Violation, and other letters required in Paragraphs 8 and 9 associated with violations for two years. After two years, these are dispositioned in accordance with 1-V41-RM-001 requirements.

H. Component Lineups and Independent Verification

Conducting component lineups are fundamental for establishing system status. This section applies to lining-up valves, switches, components, circuit breakers, and equipment necessary for proper operation and Independent Verification.

The initial startup of systems and equipment are conducted after lineup has been performed to ensure the required positions of valves, switches, components, circuit breakers, and equipment have been established.

The guidance provided in this section and the techniques described in Appendix 30 are used when conducting component lineups and independent verification. For many systems, performance of a lineup by a single individual is sufficient, but for those components where mispositioning could create an unsafe condition, or result in release of radioactive or hazardous material to the environment, a second individual verifies positions are correct. Also see Section 5C, Procedures.

(1) Preparations for Component Lineup

The SM responsibilities are to:

- assign personnel who are qualified operators to conduct lineups

NOTE

Qualified operators perform lineup. These are Process Specialists (PS), Stationary Operating Engineers (SOEs), personnel responsible for operating fire systems, and others designated by the Facility Manager. Personnel in these groups who are qualified to operate the system in question (for example, core team PS qualified in Caustic Waste Treatment System operation in Building 371) are qualified to conduct lineups

- specify the lineups to be performed in accordance with the approved procedure or Technical Operations Order which has Alignment Checklists based on the sample in Appendix 29

- authorize and document the use of alternate means of conducting lineups, such as observing process parameters, when excessive radiation exposure might be received. Documentation can be satisfied by having the SM annotate the Alignment Checklist to reflect this

(2) Conducting Component Lineup

An Alignment Checklist based on Appendix 29 is used for performing lineups and is included in the procedure being performed.

Lineups and IV are conducted according to the following:

- with permission of the SM, the Evolution Supervisor directs the lineup to commence by verbally authorizing the workers to start

- first operator (Positioner/First Checker) verifies position as indicated in the Required Position column of the procedure alignment checklist, enters this in the Actual Position column, and initials in the Positioner/First Checker block for each item listed. Unless otherwise directed by the SM, the Positioner/First Checker positions the components to the Required Position as specified by the procedure alignment checklist and enters this in the Actual Position column

- second checker (if required by the FM to have the independent second check for the system undergoing lineup) independently verifies component is positioned as indicated in the Required Position section of the alignment checklist and initials in the Second Checker block for each item listed

- operators ensure that the checks result in positive identification of the component, and actual determination of position or condition. This may require ladders or other means to gain access to remotely located items

- operators verify that locking devices are correctly installed if called for, installed on the correct component, and that the component is in the required position

- on the Alignment Checklist, operators identify items incorrectly or inadequately labeled, labels that are missing, worn, illegible, or not serviceable, and inform the SM so that IWCP work control forms can be initiated to correct the deficiencies

- operators use techniques described in Appendix 30 when verifying positions of components

- operators take the following actions when deficiencies (including components not in the required position) are identified:

  - immediately notify the SM
  - enter the deficiency in the DEFICIENCIES Section of the Alignment Checklist

- SM evaluates the deficiency and directs corrective action which is entered in the *Corrective Action block*

- operator takes the corrective action and initials in the Complete/Initials section

- upon completion, Positioner/First Checker (and second checker if two are used) sign the checklist indicating completion of the lineup and return the checklist to the SM for SM review

- SM reviews and signs the checklist, and retains a copy of checklists for initial startup alignments in a file. Alignments for IWCP work packages and surveillances are not retained by the SM

(3) Independent Verification (IV)

Independent Verification (IV) provides for checking a component's position independent of the lineup done to establish the component's position. It is one method of confirming status. Verification checks for conformance with the required position criteria; it does not alter the status of equipment or the position of components. For example, verification checks that a valve or switch is in the correct position, that is, the initial lineup was accomplished correctly.

Independent means that the individual performing the verification will not be influenced by observation of, or involvement in, the initial lineup that established the component position. For most operational activities, independence is achieved by separating the initial lineup and the verification by time and distance. This means that the verifier does not accompany the individual performing the initial lineup.

The purpose of performing independent verification is to provide a high degree of confidence in the positions of valves, switches, circuit breakers, and other components in systems which have the potential to adversely affect personnel safety or the environment, or adversely affect system operation. The application of IV at RFETS is most appropriate for new startup activities to ensure component positions are verified correct before initial operations. For systems being operated continuously, IV could be conducted upon completion of maintenance as required by the FM. It might also be used for periodic checks on systems such as fire suppression systems and breathing air systems to periodically affirm proper lineup.

The following are guidelines for FM consideration for determining when to employ IV:

- components where an inappropriate positioning could have a serious adverse affect on system operation or safety envelope integrity

- radioactively contaminated systems where inappropriate positioning could result in radioactive material release to the environment

- systems necessary to provide life support to personnel (e.g., breathing air)

- systems that could release hazardous materials or energy where personnel and significant equipment safety are concerned (e.g., steam plant safety relief valves)

- systems required to monitor environmental data required by law, permits, or consent order (e.g., effluent monitors)

The FM **SHALL** establish in an Operations Order or procedure those components to be subjected to independent verification in the facility, and the circumstances for which IV is to be accomplished.

I. Response to Indications

Personnel need to act as though indications displayed by instruments, charts, printouts, valve position indications, and alarms are accurate and **SHALL** respond accordingly until the indications are proved to be inaccurate. In other words, operators should "believe their indications".

When there is doubt concerning the accuracy of an indication, personnel **SHALL** take the following actions:

- notify the SM of the suspect indication and annotate the log of the situation

- compare, if possible, the information that is being displayed by the suspect device to another device monitoring the same parameter

- initiate an investigation of the suspect device

If the display is proved to be inaccurate, the responsible managers and the SM **SHALL** take the following actions:

- ensure the deficient device is appropriately identified (log entries, round sheet entries, status entries, etc.), and initiate corrective actions

- review the impact of the faulty item on AB compliance

- take appropriate actions, which may include

  - stopping activities until the display is repaired if required by the AB or operating procedures
  - making procedure changes and/or modifications to permit use of alternate indicators
  - taking compensatory measures if necessary

J. Response to Alarms

Alarms are warning features to inform operations personnel of conditions not within normal parameters. Alarms may be grouped together in control areas or might be located remotely throughout the facility. Alarm actuation normally requires prompt response from operations or support personnel to maintain or restore safe operating conditions. Operators treat all alarms as accurate and respond accordingly.

Operators **SHALL** respond to alarms as follows:

- perform actions specified by the Alarm Response Procedure, if applicable

- take action to place the facility in a safe condition and to protect equipment, personnel, and the environment

- notify the SM and other supervisors such as evolution supervisors of abnormal and unexpected alarms

- scan for other actuated alarms; evaluate interrelationships between the alarming indications, other facility parameters, and system operating status

- take appropriate actions to monitor equipment for abnormal conditions

- document receipt of alarm and the actions taken in the operator's log

- notify other managers having cognizance of the system of abnormal and unexpected alarms after immediate actions have been taken and the condition is stabilized

- where applicable, record abnormal and unexpected alarms on system status displays

The SM **SHALL** determine impact on the AB and take action as required by the AB.

K. Nuisance Alarms

Occasionally, conditions might occur that cause an alarm to be actuated repeatedly for a condition that is understood by operations personnel. These alarms are referred to as nuisance alarms, and may result from parameter oscillations near the alarm set point, faulty equipment, or performance of maintenance on associated equipment. Nuisance alarms are undesirable operator distractions and can mask actual alarms.

Operators **SHALL** report nuisance alarms to the SM and to the manager having cognizance of the system.

The SM or manager responsible for the system with the nuisance alarm **SHALL** ensure actions are initiated to correct the nuisance alarm.

The SM may authorize alarm deactivation, if applicable, in accordance with Section L below.

L. Controlled Deactivation of Alarms

Formal deactivation of alarms may be required for a variety of reasons, including equipment failure, damage, or extended maintenance. Deactivation of alarms is performed to silence nuisance alarms, or alarms which might be locked in for extended periods of time. This section is applicable to nuisance and other alarms which failed due to system/equipment malfunction, or are deactivated due to maintenance. This section does not apply to:

- expected alarms which occur due to normal cycling of equipment by operators (e.g., monthly fan rotation)

- deactivation which results from conducting an approved procedure such as a surveillance which includes returning the alarm to service

(1) Initiating Alarm Deactivation Requests

Operations, maintenance, or engineering personnel needing to deactivate an alarm:

- initiate alarm deactivation by completing the Originator section of Appendix 31, Alarm Deactivation Request (ADR)

- obtain concurrence signatures as indicated in Appendix 31

(2) Deactivating Alarms

If the alarm is on a Safety SSC system and will affect nuclear operations, the SM responsibilities are to:

- ensure that a Safety Evaluation Screen is conducted for alarm deactivation and attach a copy to the ADR

- ensure any required remedial/required actions for alarm deactivation have been determined and implemented

- ensure compensatory measures, if any, are entered into the Compliance Tracking System

For all deactivations, the SM responsibilities are to:

- assign an ADR number, and record the number on the ADR

- approve the ADR after obtaining the FM verbal concurrence, and enter FM concurrence in the SM Log

- authorize alarm deactivation when the following conditions are met:

  - required concurrence and approval signatures are obtained and remedial/required actions or compensatory measures are implemented in accordance with AB requirements

  - lockout/tagout is installed if required

- authorize personnel to deactivate the alarm, complete the Deactivation Section of Appendix 31, and complete the Actual Deactivation Section of the Deactivated Alarm Log

- make a SM Log entry each time an alarm is deactivated and update facility status

- enter the ADR in the Deactivated Alarm notebook which is the log of ADRs. The notebook **Should** be in three sections, one for the Deactivated Alarm Log (Appendix 32); one for open ADRs; one for closed ADRs. Closed ADRs will be kept in the

notebook for a year then dispositioned in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources

- have a monthly review of Deactivated Alarm Log and associated ADRs performed and enter deficiencies on a sheet for this purpose in the front of the Deactivated Alarm notebook with the reviewer's name, signature, and date of review. The FM designates personnel to conduct the review if other than SM, STA, or the Facility Engineering Manager

The notebook is to contain a sheet in the front to record reviews and any identified deficiencies.

(3) Reactivating Alarms

The SM authorizes reactivation of alarms in accordance with the requirements of Section 7.G.(11), Return to Service and Operability Declaration.

Assigned personnel reactivate the alarm and the SM completes the Reactivation Section of Appendix 31, and completes the actual Reactivation Section of the Deactivated Alarm Log and initials where indicated. Make a SM Log entry each time an alarm is activated, and update facility status.

M. Resetting Protective Devices

When a protective device such as a circuit breaker or fuse trips or fails, operations personnel responsibilities are to:

- inform the SM and the manager responsible for the equipment
- attempt to determine the cause of the trip

- if directed by the SM, the device may be reset one time

A protective device is not reset a second time unless the cause of the trip is understood and corrected, and has been authorized by the Shift Manager.

Document actions taken in the SM's Log or the SOE Log as appropriate.

8. REFERENCES

1-7400-IWCP-TOC	Integrated Work Control Program Manual
1-15320-HSP-2.08	Lockout/Tagout
1-62200-HSP-13.08	Housekeeping and Sanitation
1-C10-NSM-04.03	Safety Evaluation Screen
1-C11-NSM-04.05	Unreviewed Safety Question Determination
1-D97-ADM-16.01	Occurrence Reporting Process
MAN-001-SDRM	Site Documents Requirements Manual
1-MAN-010-S&A	Safeguards and Accountability Manual - General Requirements
1-MAN-013-SIOM	Site Integrated Oversight Manual
1-MAN-016-ISM	Integrated Safety Management System Manual
1-MAN-07-LLGI-RM	Site Lessons Learned Generic Implications Requirements Manual
1-MAN-018-NSM	Nuclear Safety Manual
1-R26-NSM-04.06	Justification for Continued Operation (JCO) Preparation
1-V41-RM-001	Records Management Guidance for Record Sources
2-L97-COEM-AMN-163	Engineering Operability Evaluation (EOE) Preparation
3-W24-MA-002	Kaiser-Hill Company, L.L.C. Management Assessment Program

4-B19-NSM 03.12	Nuclear Material Safety Limits and Criticality Safety Operating Limits Validation
96-RF/T&Q-0005	Training and Qualification Program (part of the Training Users Manual)
DOE Order 5480.19	Conduct of Operations Requirements for DOE Facilities
DOE Order 5480.20A	Personnel Selection, Qualification and Training Requirements for DOE Nuclear Facilities
1-MAN-026	Kaiser-Hill RFETS Security Manual
MAN-0063-DC	Site Document Control
MAN-027-SERM	Site Engineering Requirements Manual
MAN-062-CAUSE ANALYSIS	Cause Analysis Requirements Manual
Policy Manual	Kaiser-Hill Company, L.L.C., Policy Manual
SX-164	Standard for Facility System and Component Identification and Labeling
Tech 15	Defense Nuclear Facilities Safety Board Technical Report, Operational Formality of Department of Energy Nuclear Facilities and Activities
	Rocky Flats Nuclear Material Control and Accountability Plan
	Training Users Manual

APPENDIX 1

Plan of the Day Content

- Mission Activities
- Maintenance and Post Maintenance Testing
- Preventive Maintenance
- Minor Maintenance
- Construction Work
- Demolition Work
- Surveillances
- Waste Transfer Operations
- Special Nuclear Material, Hazardous Material, and Chemical Inventories
- Major Equipment Rotation which Impacts Building Availability or Planned Work
- Alarm Tests and Calibrations
- Instrument Tests and Calibrations
- Analyses
- Tours, Audits, and Inspections
- Emergency Exercises and Drills
- Training Involving System Operation
- Testing (components, systems)
- Experiments
- Security Force Exercises
- Movement of Waste Drums or Other Containers of Radioactive Material
- General Housekeeping
- Planned Power Outages or Other Utility Outages
- Other

APPENDIX 2

Plan of the Day Format

Page 1 of 2

SSOC - Safe Sites Of Colorado, LLC
Rocky Flats - Environmental Technology Site

PLAN OF THE DAY (POD)
PROJECT FACILITY SCHEDULE
and Support Buildings

3/27/98 Page 1 of 2

Rev 3.0 (11/97)

FOR PERIOD OF: MONDAY, MARCH 30-98

FOR MASTER COPY OF THE POD/POW SEE SHIFT MANAGER

PRESENT: MON 3/30

Facility Condition - NORMAL

Total Evolutions 57

#	DESCRIPTION	BLDG. NO'S	WCF# / PROC#	Mat NO.	RESP. ORG.	S-DATE	PreEv	S-TIME	3	1	2	Est.Comp.	SSW	RCT'S	RWP#	RCT	P.S.	NMC	MTC	OTH	RESPONSIBLE MNGR.
0	*LCO SURVEILLANCE'S*																				
1	*(DAILY-MODS)* GLOVEBOX PRESSURE DIFFERENTIAL (GPO-3)	776/777	4X72-UOP-776-007	B - 4	S S O C	Feb-93	N/A	8:00				O G		N/A	0205						M. DIGI-X4810
2	*(SHIFTLY)* VERIFY ZONE (I) FANS OPERABILITY (PCS-1)	776/777	4X87-UOP-776-002	B - 4	UTILITIES	Feb-01	N/A	22:00				O G		N/A	0205		SDE				E. BLUSH - X8093
3	*(SHIFTLY)* VERIFY ZONE (II) FANS OPERABILITY (SCS-1)	776/777	4X87-UOP-776-002	B - 4	UTILITIES	Feb-01	N/A	12:00				O G		N/A	0205		SDE				E. BLUSH - X8093
4	*(SHIFTLY)* VERIFY SUPPLY FAN PL-252 NOT IN OPERATION	776	JCO-776,87,1104	B-4	UTILITIES	Oct-96	N/A	1:00				May-12		N/A	N/A		SDE				E. BLUSH - X8093
5	*(WEEKLY)* STORING COMBUSTIBLES WITHIN 5FT OF DRUMS (MON)	776/777	JCO-776-97,1184	B-4	PU OPS	Oct-96	N/A	9:00				May-12		N/A	0205		1				M. DIGI-X4810
9	*RCRA*																				
2	(DAILY / WEEKLY / MONTHLY) RCRA INSPECTIONS/VERIFICATION	776/777	1 - 10000 MWRM	B - 9	RMRS	May-96	8:00	8:00				O G		N/A	0205						D. BROWN - X3503
3	*(DAILY-DAYS)* AIR EMISSION SURVEILLANCE	776/777	WO - 4301	B - 9	OPS	Feb-01	N/A	N/A				O G		N/A	0205						M. DIGI-X4810
0	*VSS / MON VSS MTCE*																				
1	MINOR CARPENTER WORK	776/777	TO089118	B - 15	M T C E	Jul-14	N/A	N/A				OG		O C	0201						R. ERHART - X2963
2	MINOR ELECTRICAL WORK	776/777	TO089118	B - 15	M T C E	Jul-14	N/A	N/A				OG		O C	0201						E. ATENCIO - X7033
3	MINOR MACHINIST WORK	776/777	TO089118	B - 15	M T C E	Jul-14	N/A	N/A				OG		O C	0201						R. ERHART - X2963
4	MINOR PAINTER WORK	776/777	TO089118	B - 15	M T C E	Jul-14	N/A	N/A				OG		O C	0201						E. ATENCIO - X7033
5	MINOR PIPEFITTER WORK	776/777	TO089118	B - 15	M T C E	Jul-14	N/A	N/A				OG		O C	0201						R. ERHART - X2963
6	MINOR SHEETMETAL WORK	776/777	TO089118	B - 15	M T C E	Jul-14	N/A	N/A				OG		O C	0201						E. ATENCIO - X7033
7	PM0 VARIOUS EQUIPMENT	776/777	KR93AAPM	B - 15	M T C E	Jul-14	N/A	N/A				OG		O C	0201				2		E. ATENCIO - X7033
11	REPLACE CONDENSATE LINES	776/777	T0090357	B-5	CONST MGMT	Dec-11	7:00	8:00				Apr-00		N/A	N/A						T. ERNST - X7358
14	FABRICATE/INSTALL MANIFOLD ASSEMBLY (2ND FLOOR)	776	TO083823	B-15	MTCE	Mar-30	7:30	8:00				Mar-31		0201	OC						S. PFUPSEN - X8018
16	REWORK PLC FOR PORTABLE GLOVEBOX ROOM 430	777	TO092417	B-15	MTCE	Mar-30	8:00	8:30				Apr-01		0201	OC				1		S. PFUPSEN - X8018
17	CALIBRATE PHOTOHELIC & REMOTE READOUT (ROOMS 430 & 134	776/777	S-P-97105	B-5	CAL LAB	Mar-30	8:15	8:30				Mar-30		0201	OC						E. STUNSON - X5236
10	*MON - LCO SURVEILLANCES*																				
1	*(DAILY-DAYS)* AIR HEAD SURVEYS	776/777	ROI 4.01	B - 12	RAD OPS	Feb-01	N/A	7:30				O G		F T	0200						B. SUTTON - X2942
2	*(SHIFTLY)* "CC" TOURS	776/777	ROI 3.01	B - 12	RAD OPS	Feb-01	N/A	N/A				O G		F T	0200						B. SUTTON - X2942
3	*(SHIFTLY)* CALIBRATION OF SAAMS / CAMS	776/777	RI - 2203	B - 12	RAD INST	May-30	N/A	A S				O G		N/A	0200						J. ALDER - X5496
4	*(SHIFTLY)* ROUTINE SURVEYS	776/777	ROI 3.01	B - 12	RAD OPS	Feb-01	N/A	7:30				O G		F T	0200						B. SUTTON - X2942
5	*(SHIFTLY)* STEP - OFF - PAD	776	ROI 2.01	B - 12	RAD OPS	Feb-01	N/A	A S				O G		F T	1193						B. SUTTON - X2942
8	*(WEEKLY)* METAL DETECTOR TEST (3RD SHIFT)	776	4-087-TEST-002	B - 17	ALARMS	Jul-14	N/A	N/A				M O N		N/A	N/A						G. NUSS - X3872
10	*(MONTHLY)* NUCLEAR SAFETY AUDIT	776/777	NSP - 510	B - 6	VARIOUS	A S	8:00	8:30				A S		O C	0205					2	SSOC/NUM/PRMRS
11	*(MONTHLY)* SAAM / CAM TEST (1st & 2nd FLOOR)	776/777	4 - S35 - RI - 2204	B - 9	A.R.C.I.E.	Dec-22	7:30	8:00				A S		O C	0201						J. ALDER - X5496
15	BUBBLER SAMPLE COLLECTION ON PLENUMS	776	5 - 21000 - OPS AP-01	B - 12	ENV MON	Jan-01	N/A	8:00				M-W-F		N/A	N/A						L. PAULEY - X3524
16	CAL / MTCE / TESTING & GAS BOTTLE CHANGE (PCM-2)	776	HPI - 64106426	B - 12	ALPHA	Jul-09	N/A	N/A				O G		N/A	N/A						D. NEWTON - X4094
18	PERFORMANCE TEST / CAL OF ALPHA METS	776/777	RI - 2202 / HPI - 2200	B - 12	ALPHA	Feb-01	8:00	8:30				O G		N/A	0201						D. NEWTON - X4094
19	SAAM VERIFICATIONS (SAD - 1 / MON & THUR)	776/777	ROI 4.05	B - 12	RAD OPS	Jan-01	7:30	A S				MON/THU		O C	0201						B. SUTTON - X2942

APPENDIX 2

Plan of the Day Format
Page 2 of 2

SSOC - Safe Sites Of Colorado, LLC
Rocky Flats - Environmental Technology Site

PLAN OF THE WEEK (POW)
PROJECT FACILITY SCHEDULE
and Support Buildings

3/27/98 Page 1 of 3

Rev.2.0 (11/97)

FOR PERIOD OF: March 30 TO April 5-98

FOR MASTER COPY OF THE POD/POW SEE SHIFT MANAGER

PLANNED EVOLUTION'S: MON 3/30 | TUE 3/31 | WED 4/1 | THU 4/2 | FRI 4/3 | SAT 4/4 | SUN 4/5

Facility Condition - NORMAL

Total Evolutions 77

#	DESCRIPTION	BLDG. NO'S	WCF#/PROC#	MAI NO.	RESP. ORG.	S-DATE	PreEv	S-TIME	Est.Comp.	SSW	RCT'S	RWP#	RCT	P.S.	NMC	MTC	OTH	RESPONSIBLE MNGR.
0	LCO SURVEILLANCE'S																	
1	(DAILY-4/DS) GLOVEBOX PRESSURE DIFFERENTIAL (GPD-3)	776/777	4073-UOP-776-007	B-4	SSOC	Feb-03	N/A	0:00	OG		N/A	0265						M. DIGI-X4010
2	(SHIFTLY) VERIFY ZONE (I) FANS OPERABILITY (PCS-1)	776/777	4003-UOP-776-002	B-4	UTILITIES	Feb-01	N/A	22:00	OG		N/A	0265		SOE				E. BLUSH-X0803
3	(SHIFTLY) VERIFY ZONE (II) FANS OPERABILITY (SCS-1)	776/777	4003-UOP-776-002	B-4	UTILITIES	Feb-01	N/A	12:00	OG		N/A	0265		SOE				E. BLUSH-X0803
4	(SHIFTLY) VERIFY SUPPLY FAN PL-252 NOT IN OPERATION	776	JCO-776.07.1104	B-4	UTILITIES	Oct-00	N/A	0:00	May-12		N/A	N/A		SOE				E. BLUSH-X0803
5	(WEEKLY) STORING COMBUSTIBLES WITHIN 5FT OF DRUMS (MOH)	776/777	JCO-776.07.1104	B-4	PU OPS	Oct-00	N/A	0:00	May-12		N/A	0265		1				M. DIGI-X4010
6	(MONTHLY) DP HEPA FILTER PLENUM STAGES	776	PCM-2 & SCM-1	B-4	UTILITIES	AS	2:30	4:30	AS		N/A	N/A		SOE				E. BLUSH-X0803
7	(MONTHLY) EMERGENCY GENERATOR LOAD TEST EPM 2&3	776/777	4-X73-776-000	B-5	UTILITIES	AS	2:30	4:30	AS		OC	0201		SOE		2	4	E. BLUSH-X0803
8	(MONTHLY) FAN INTERLOCK (SCM-3)	776/777	4-X76-UOP-776-011	B-4	CAL LAB	AS	6:30	8:30	AS		FT	0201	1				2	E. STUNSON-X5230
9	(MONTHLY) FAN ROTATION	776	PCM-1	B-5	UTILITIES	AS	2:30	4:30	AS		N/A	N/A		SOE				E. BLUSH-X0803
10	(MONTHLY) PMO ON LBOW BATTERIES & CHARGER (201A)	776	83-C875-MP-03	B-1	A.R.C.I.E.	AS	0:00	11:30	AS		OC	0201						E. CALDERON-X7531
11	(MONTHLY) ZONE (I) PRESSURE CONTROLLERS	776	PCM-3	B-5	UTILITIES	AS	2:30	4:30	AS		N/A	N/A		SOE				E. BLUSH-X0803
12	(MONTHLY) ZONE (II) ACTUATE PRESSURE CONTROLLER	776	SCM-2	B-5	UTILITIES	AS	2:30	4:30	AS		N/A	N/A		SOE				E. BLUSH-X0803
[illegible]	[illegible]) ZONE (II) OPERABLE FP-250 EX FANS SCM-4	776/777	4-U77-UOP-776-010	B-4	UTILITIES	AS	2:30	4:30	AS		N/A	N/A		SOE				E. BLUSH-X0803
[illegible]	[illegible]) VERIFY EMERGENCY DIESEL GEN BATT EPM-5	776	UOP-776-017	B-15	MTCE	AS	7:30	11:00	AS		N/A	N/A				1		M. SWARTZ-X5107
0	RCRA																	
1	(DAILY/WEEKLY/MONTHLY) RCRA INSPECTIONS/VERIFICATION	776/777	1-10000-HWRM	B-8	RMRS	May-00	0:00	0:00	OG		N/A	0265						D. BROWN-X5560
2	(DAILY-DAYS) AIR EMISSION SURVEILLANCE	776/777	WO-4301	B-8	OPS	Feb-01	N/A	N/A	OG		N/A	0265						M. DIGI-X4010
3	(WEEKLY-1230) RCRA INSPECTION OF 776 PIT	776	1-10000-HWRM	B-9	SSOC	Jul-14	N/A	N/A	WED		OC	0265		1				M. DIGI-X4010
0	VSS/NON VSS MTCE																	
1	MINOR CARPENTER WORK	776/777	TOO00118	B-15	MTCE	Jul-14	N/A	N/A	OG		OC	0201						R. ERHART-X2903
2	MINOR ELECTRICAL WORK	776/777	TOO00118	B-15	MTCE	Jul-14	N/A	N/A	OG		OC	0201						E. ATENCIO-X2903
3	MINOR MACHINIST WORK	776/777	TOO00118	B-15	MTCE	Jul-14	N/A	N/A	OG		OC	0201						R. ERHART-X2903
4	MINOR PAINTER WORK	776/777	TOO00118	B-15	MTCE	Jul-14	N/A	N/A	OG		OC	0201						E. ATENCIO-X2903
5	MINOR PIPEFITTER WORK	776/777	TOO00118	B-15	MTCE	Jul-14	N/A	N/A	OG		OC	0201						R. ERHART-X2903
6	MINOR SHEETMETAL WORK	776/777	TOO00118	B-15	MTCE	Jul-14	N/A	N/A	OG		OC	0201						E. ATENCIO-X2903
7	PMO VARIOUS EQUIPMENT	776/777	KR83AAPM	B-15	MTCE	Jul-14	N/A	N/A	OG		OC	0201				2		E. ATENCIO-X2903
8	REPLACE CONDENSATE LINES	776/777	T800357	B-5	CONST MGMT	Dec-11	2:00	0:00	Apr-09		N/A	N/A						T. ERNST-X7230
9	INSTALL BREATHING AIR DROPS	776/777	TOO00135	B-15	MTCE	Jan-27	7:30	0:00	Apr-07		OC	0201				2		K. VANZANT-X2901
10	FABRICATE/INSTALL MANIFOLD ASSEMBLY (2ND FLOOR)	776	TOO00823	B-15	MTCE	Mar-30	7:30	0:00	Mar-31		0201	OC						S. PFLIPSEN-X3016
11	TSR TRANSFORMER PO22D-14	776	TOO00175	B-7	MTCE	Apr-01	7:30	0:00	Apr-02		0201	OC				1		S. PFLIPSEN-X3016
12	REWORK PLC FOR PORTABLE GLOVEBOX ROOM 430	777	TOO02417	B-15	MTCE	Mar-30	0:00	0:30	Apr-01		0201	OC				1		S. PFLIPSEN-X3016
13	CALIBRATE PHOTOHELIC & REMOTE READOUT (ROOMS 430 & 434	776/777	S-P-87165	B-4	CAL LAB	Mar-30	0:15	0:30	Mar-30		0201	OC						E. STUNSON-X5230
0	NON-LCO SURVEILLANCE'S																	
1	(DAILY-DAYS) AIR HEAD SURVEYS	776/777	ROI 4.01	B-12	RAD OPS	Feb-01	N/A	7:30	OG		FT	0200						B. SUTTON-X2902
2	(SHIFTLY) "CC" TOURS	776/777	ROI 3.01	B-12	RAD OPS	Feb-01	N/A	N/A	OG		FT	0200						B. SUTTON-X2902
3	(SHIFTLY) CALIBRATION OF SAAMS/CAMS	776/777	RI-2203	B-12	RAD INST	May-20	N/A	AS	OG		N/A	0200						J. ALDER-X5000

APPENDIX 3

Evolution Request Form

EVOLUTION REQUEST FORM

Date: _____ WP #/Procedure #: _____
Evolution Description: _____
_____
The building in which the activity is to be performed: _____
The organization performing the activity: _____

Type of Activity (circle the section of the POD appropriate for the activity):

Surveillance Maintenance Tour/Inspection Training Mission
Other: _____

Type of Schedule: Daily Weekly One Time Other: _____

	1ST	2nd	3rd
Shift for the Activity?			
Total Personnel Involved	_____	_____	_____
Material Ready?	Yes	No	N/A
Packages Complete with Signatures?	Yes	No	N/A
LO/TO Required?	Yes	No	N/A
Radiological Work Permit?	Yes	No	N/A
	RWP #: _____		

Date to Perform Work: _____ Start Time: _____
Estimated Completion Date: _____ End Time: _____
Pre-Evolution Briefing Time/Date: _____ Place: _____
Specific Hazards Involved: _____
_____
Hazard Controls: _____
_____
_____
Support Resources Needed: _____
_____
_____
Comments: _____
_____
_____

Name: _____ Organization: _____
Phone/Page/Facsimile: _____ Building: _____
Signature: _____ Date: _____

APPENDIX 4

Pre-Evolution Briefing Record

Page 1 of 4

Evolution Description: _____

Evolution Supervisor: _____

A. Date/Time of PEB: _____

B. Applicable Procedure Number/Work Package Number: _____

C. Personnel Attending: (*Filled-in here, or attach an attendance roster)*:

NAME	EMPLOYEE #	COMPANY	NAME	EMPLOYEE #	COMPANY

Briefing Check-Off List:	INITIALS
1. The evolution is scheduled on the POD.	
2. The trainee to operator ratio of trainees is authorized by the FM.	
3. Evolution Supervisor has conducted a walkdown for new or complex evolutions if not previously dry-run.	
4. Participants have the procedures, work package, or other documents needed.	

APPENDIX 4

Pre-Evolution Briefing Record
Page 2 of 4

5. The necessary documents are available for use at the PEB and are current (*i.e., CSOL/NMSL, MSDS, RWP, procedures, hazards analyses, criticality safety analyses, etc.*) _____

6. Evolution Supervisor briefed changes to procedures which have occurred since the activity was last conducted. _____

7. Necessary personnel are in attendance. Trainee limitations on operating equipment/taking rounds/making log entries discussed. _____

8. The scope of the evolution to be performed and responsibilities of each individual were identified and discussed. Procedure covered in sufficient detail to ensure participants understand the evolution, and their role. If moving drums or containers with radioactive material, the CSO is involved in the evolution, or an exemption granted by the SM. _____

9. The current facility conditions, impacts of other evolutions, and impacts of this evolution on ongoing work discussed with SM. _____

10. The precautions, limitations, initial conditions, and prerequisites were reviewed. _____

11. Adequate communications are available, are operable, and periodic operability checks are discussed. _____

12. The required tools and equipment are available. _____

13. Portable instruments are calibrated (*if required*). _____

14. Personnel taking, receiving, or transmitting data are familiar with the data requirements. _____

15. Expected instrument readings discussed (*if applicable*). _____

16. Appropriate log sheets, material transfer, and data recording forms are available. _____

17. Discuss expected IDCs, and action to take if other IDCs are encountered. _____

APPENDIX 4

Pre-Evolution Briefing Record

Page 3 of 4

18. Are hazardous materials (*e.g., substance, wastes, or chemicals*) present? [ ] *YES* [ ] *NO* (*if answer is no, continue the briefing check-off list. If yes, complete and discuss Appendix 5, Hazardous Material Release Prevention/Preparedness Checklist, and continue the briefing check-off list*). _____

19. The hazards associated with the evolution have been discussed. PPE/safety equipment discussed. Location of eyewash and safety showers, and spill kits discussed (*if applicable*). _____

20. Applicable sections of the WSRIC have been discussed. Waste Generator qualified personnel available. _____

21. Dosimetry and radiological conditions have been discussed including the RWP(s), expected contamination levels, expected exposure levels, use of TLDs and SRDs, and postings. Discuss neutron/gamma ratio for applicable jobs. _____

22. Special radiological control requirements from the applicable ALARA review and RWP have been discussed. Methods to minimize exposure discussed. _____

23. Radiological limiting conditions that would void the RWP (*if applicable*) have been discussed, including methods to minimize exposure. RWP suspension limits discussed/actions to take discussed. _____

24. Radiological control holds points discussed. _____

25. Actions to be taken in the event of emergencies, or if operating limits are exceeded, discussed. (*fire, criticality, glovebox overheat, SAAM/CAM alarm, CSOL limits, etc.*). _____

26. Recent past problems, changes, unusual events, and occurrences relative to the evolution discussed. _____

27. Potential shift changes, watch reliefs and breaks discussed. _____

28. Applicable NMSLs and CSOLs discussed and NSM 3.12 assignment made. Reminder made that satisfactory 3.12 is reported to the Evolution Supervisor prior to activity start. _____

APPENDIX 4

Pre-Evolution Briefing Record
Page 4 of 4

29. Open criticality infractions which impact the evolution are discussed. Discuss MAR control (*if applicable*); steps to take if exceeded. _____

30. Egress procedures and egress routes and assembly areas discussed. _____

31. Unique postings in the work area discussed. _____

32. Escort requirements discussed and escort assignments made. Responsibilities for OJT instructors to directly supervise trainees reemphasized. _____

33. Provisions for housekeeping and final clean-up discussed. _____

34. Open-ended questions asked to ensure participants understand the evolution and are aware of hazards involved, hazard controls, and responses expected during the evolution. _____

35. All questions have been adequately answered. _____

36. A summary of the evolution was discussed. _____

37. Watches synchronized for applicable evolutions. _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Evolution Supervisor Date

APPENDIX 5

Hazardous Material Release Prevention/Preparedness Checklist

Completed by: _____ Date: _____
Evolution Description: _____

Fill-out when hazardous materials (*e.g., substances, wastes, or chemicals*) are involved:

1. Identify the hazards, and the hazardous material and associated systems. (concentration and volumes). Discuss the effect of these on the individual:

_____
_____
_____
_____

2. Identify potential "failure points" in the systems:
   - [ ] Valves _____
   - [ ] Flange connections _____
   - [ ] Sight glasses _____
   - [ ] Hoses or tubing _____
   - [ ] Liquid transfer points/containers _____
   - [ ] Other _____
   _____

3. Discuss controls for prevention/minimization of release/or to minimize the hazards and protect against over-exposure. Discuss PPE/Safety Equipment to be used. Discuss spill kits/safety showers/eyewash locations:

_____
_____
_____

4. Identify hazardous work situations (*e.g., elevated work, confined space, trenches*):

_____
_____
_____

5. Pre-planned response discussion: *(discuss incidental or emergency response threshold and appropriate PPE)*:

_____
_____
_____

USE ADDITIONAL SHEETS AS NECESSARY

_____

Briefer Date

APPENDIX 6

Temporary Modification Request Form

TEMPORARY MODIFICATION REQUEST FORM

TM No.: _____ Expiration Date: _____

Safety SSC Affected: YES NO (*circle one*)

Affected Equipment and Functions:

_____

_____

_____

Reasons for Modification and Summary Description:

_____

_____

_____

Requested by:

_____	_____	_____	_____
Print Name and Organization	Signature	Extension	Date

Comments: _____

_____

_____

_____

WCF No.: _____ Safety Screened _____ Date: _____
Yes/NA/Shift Manager's Initials

Shift Manager Review:

_____	_____	_____	_____
Print Name	Signature	Extension	Date

Facility Engineering Manager Concurrence:

_____	_____	_____	_____
Print Name	Signature	Extension	Date

Facility Manager APPROVAL*:

_____	_____	_____	_____
Print Name	Signature	Extension	Date

**May be obtained by phone in which case Shift Manager signs this line indicating phoncon approval.*

APPENDIX 7
Temporary Modification Log Sheet

TEMPORARY MODIFICATION LOG SHEET

TM NO.	TAG #/TYPE	EXPIRATION DATE	EXTENSION DATE (*date extended*)	AFFECTED EQUIPMENT	INSTALLED DATE	RESTORED DATE/INITIALS

APPENDIX 8

Temporary Modification Tag Sheet

Page 1 of 2

TEMPORARY MODIFICATION TAG SHEET

TM No.: _____

Tag Types DAA -Disabled Annunciator Alarm PCC -Pulled Circuit Card LL -Lifted Lead
MJ -Mechanical Jumper EJ -Electrical Jumper BF -Blank Flange

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

Tag # _____ Type _____ To Tag # _____
Location: _____
Description _____

APPENDIX 8

INSTRUCTIONS FOR PREPARATION OF A TM TAG SHEET AND INSTRUCTIONS FOR PREPARATION OF A TM TAG

Page 2 of 2

INSTRUCTIONS FOR COMPLETION OF A TM TAG SHEET

- **TM No.**: TM number.
- **Tag No.**: Tag number (such as 707-1, 707-2, 707-3, etc.)
- **Location**: Give a description of the location such as building number, floor, room number, northeast corner, etc.
- ***Description:*** *Include the following information:*
  - Disabled Annunciator Alarm (DAA) - panel name, number, window location, window nomenclature.
  - Lifted Lead (LL) - cabinet name, number, terminal block number, terminal number, wire number.
  - Electrical Jumper (EJ) - cabinet name, number, terminal block number, to tag # (if applicable).
  - Pulled Circuit Card (PCC) - cabinet name, number, circuit card.
  - Mechanical Jumpers (MJ) - location, line number or valve number, to tag # (if applicable).
  - Blank Flange (BF) - location, line number or flange number.
  - Other (O) - Identify type of device, provide enough information for location and evaluation of the temporary modification and to tag # (if applicable)
- **Tag Types**: Such as Disabled Annunciator Alarm (DAA), Lifted Lead (LL), Electrical Jumper (EJ) and others listed in the Description Section above.
- **To Tag #**: Jumpers that are of such length that both ends are not visible when installed will have a temporary modification tag attached to each end. Indicate the tag number at the other end of the jumper in the To Tag # block. For shorter jumpers or other modification, enter N/A. For short jumpers with only one tag, enter information about both ends of the jumper.

INSTRUCTIONS FOR COMPLETION OF A TM TAG

NOTE: Use information from the **TM Tag Sheet** to fill out **Tags.**

- **TM No.**: TM number.
- **Tag No.**: Tag number
- **Location**: Give a description of the location such as building number, floor, room number, northeast corner, etc.
- **Description**: Include the following information:
  - Pulled Circuit Card (PCC) - cabinet name, number, circuit card.
  - Disabled Annunciator Alarm (DAA) - panel name, number, window location, window nomenclature.
  - Lifted Lead (LL) - cabinet name, number, terminal block number, terminal number, wire number.
  - Electrical Jumper (EJ) - cabinet name, number, terminal block number, to tag # (*if applicable*).
  - Mechanical Jumpers (MJ) - location, line number or valve number, to tag # (*if applicable*).
  - Blank Flange (BF) - location, line number or flange number.
  - Other (O) - Identify type of device, provide enough information for location and evaluation of the temporary modification and to tag # (*if applicable*).
- **Installed by**: Indicate the name of individual installing the tag.
- **Date**: Date of installation of tag.
- **Verified by**: Name of a second individual verifying the installation of the tag.
- **Date**: Date installation was verified.

APPENDIX 9

Temporary Modification Extension Request

TEMPORARY MODIFICATION EXTENSION REQUEST

TM No.: _____

Current TM Expiration Date: _____

Desired Expiration Date: _____

Reason for Extension: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Safety Evaluation Screened: _____ _____
Yes/NA/Shift Manager's Initials Date

New Expiration Date Approved is: _____

Submitted by: _____ _____
Signature Date

Reviewed by: _____ _____
Shift Manager Date

Approvals: _____ _____
Facility Engineering Manager Date

_____ _____
Facility Manager Date

APPENDIX 10

Temporary Modification Tag

TEMPORARY MODIFICATION TAG

TM No.: _____

Tag No.: _____

Location: _____

_____

_____

Description: _____

_____

_____

_____

Installed by: _____

Date: _____

Verified by: _____

Date: _____

Tags are available from the Building 551 Warehouse using the General Stores Catalog.

APPENDIX 11

Shift Relief and Turnover Checklist

		Relieving Individual's Initials
1.	Major activities ongoing or planned/major maintenance ongoing or planned.	_____
2.	Problems or significant issue discussion.	_____
3.	Plan of the Day reviewed.	_____
4.	Systems Status Display review.	_____
5.	Surveillances ongoing or planned.	_____
6.	LO/TO approved during the shift relevant to the work station discussed.	_____
7.	Unusual conditions.	_____
8.	Equipment problems.	_____
9.	Equipment alarm conditions.	_____
10.	Tests or experiments ongoing or planned.	_____
11.	Other significant information such as LCO surveillances, remedial action/required actions statements in effect, maintenance being performed or planned as a result.	_____
12.	Log and round sheet reviews.	_____
12.	Areas posted for respiratory protection noted.	_____
13.	Waste and environmental issues or problems discussed.	_____
14.	Shift Orders in effect reviewed/recent changes to Operations Orders and procedures reviewed.	_____
15.	Security key turnover.	_____
16.	Fire watches ongoing or planned.	_____
17.	MAR Limits review (SM, STA)	_____
19.	General Comments.	_____

_____

_____

_____

Individual being relieved:

_____
Name/Date/Time

Individual relieving:

_____
Name/Date/Time

APPENDIX 12

Standing Order Format

Standing Order No: _____
Revision: _____
Effective Date: _____
Expiration Date: _____
Page: _____

Subject: _____
Title

Purpose:

Scope and Applicability:

Instructions:

Independent Safety Review (*if required*) _____
Date

Approved by: _____
Name/Title Date

Responsible Manager Name: _____

REVIEWED FOR CLASSIFICATION
BY: _____
DATE: _____

APPENDIX 13

Operations Order Evaluation Checklist

Page 1 of 3

Operations Order No.: _____ Revision No.: _____

Title: _____

Originator: _____ Extension/Pager: _____ Building: _____

This checklist is used to determine if a proposed Operations Order is an Administrative Operations Order or a Technical Operations Order. Additionally, if the Operations Order is determined to be a Technical Operations Order, an evaluation is made to determine whether it is an Interim Operations Order. The Facility Manager determines if the Technical Operations Order is urgent enough to issue before the review cycle is completed. If so, it is assigned to a qualified member of the facility staff (*a SME*) to review the Operations Order for technical content. Operations Orders are approved by the Facility Manager.

Basic Checklist

The following questions are answered in order to determine if the proposed Operations Order is Administrative or Technical, and to categorize the Operations Order as non-nuclear safety related, or affecting the Authorization Basis. If the answer to all five questions is NO, the Operations Order is Administrative. If the answer to any of the questions in this section is YES, then this is a Technical Operations Order, and the disciplines indicated below are required to review the order.

For Technical Operations Orders written in nuclear facilities, a USQ Safety Evaluation Screen **SHALL** be performed.

		YES	NO
1.	Could the proposed Operations Order affect personnel or public safety?	[ ]	[ ]
2.	Could the proposed Operations Order affect the environment?	[ ]	[ ]
3.	Could the proposed Operations Order affect nuclear safety or the safety envelope?	[ ]	[ ]

APPENDIX 13

Operations Order Evaluation Checklist

Page 2 of 3

4.	Does the proposed Operations Order provide procedural steps for manipulation of facility systems or equipment?	[ ]	[ ]
5.	Does the proposed Operations Order involve handling, processing, use, storage, transfer, measurement, or inventory of nuclear material, nuclear criticality detection and alarm, or Nuclear Material Safety Limit (NMSL)/Criticality Safety Operating Limit (CSOL)?	[ ]	[ ]

Reviews Required:

- For non-nuclear safety related Technical Operations Orders (*Questions 1, 2, or 4 checked YES*):
  - Industrial Hygiene and Safety (*only required for non-nuclear safety issues*)
  - Engineering (*technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager*)
- For Technical Operations Orders that may affect the Authorization Basis or criticality safety, (*Questions 3 or 5 or any question on the extended checklist checked YES*):
  - Nuclear Safety Engineering and Criticality Safety
  - Engineering (*technical staff assigned to the affected facility or as assigned by the Facility Engineering Manager*)

Extended Checklist

This section determines if any additional reviews are required. If any of these questions is answered YES, then the discipline(s) associated with that question also review(s) the Operations Order. A YES response to any Question 6 through 8 requires at least one YES response to Questions 1 through 5.

		YES	NO
6.	Does the proposed Operations Order direct the movement of the Special Nuclear Materials (SNM) or other fissile or non-fissile radioactive materials? If YES, Nuclear Materials Safeguards and Accountability, Radiological Safety, and Shipping are required to review the proposed Operations Order.	[ ]	[ ]

APPENDIX 13

Operations Order Evaluation Checklist
Page 3 of 3

7. Does the proposed Operations Order alter or reconfigure any system or component that either mitigates the consequences of a radiological accident, or monitors or operates any radiological system or process? [ ] [ ]

   If YES, Radiological Safety (Radiological Engineering) is required to review the proposed Operations Order.

8. Does the proposed Operations Order monitor or survey for radiological contamination, or have the potential to breech any system component that has the potential to release radioactive material? [ ] [ ]

   If YES, Radiological Safety (Radiological Operations) is required to review the proposed Operations Order.

Categorization

Operations Order issued as a(n) _____ Administrative
_____ Technical

If Technical, Interim Operations Order? [ ] YES [ ] NO [ ] N/A

If YES, qualified staff member's and Facility Manager's signature required.

If NO or N/A, only the Facility Manager's signature is required.

_____
Staff Member Date

_____
Facility Manager Date

APPENDIX 14

Operations Order Format

Building
Operations Order

Operations Order No: _____
Revision: _____
Effective Date: _____
Expiration Date: _____
Page: _____

Category: [ ] Administrative [ ] Technical [ ] Interim

Approved by: _____
Facility Manager Date

[ ] Convert to Procedure by: (_____) _____
Date Assigned Manager

[ ] Required Reading: _____
Indicate Distribution

Purpose:

Scope and Applicability: This Operations Order applies to:

Instructions:

REVIEWED FOR CLASSIFICATION
BY: _____
DATE: _____

APPENDIX 15

Shift Order Format

Building
Shift Order

Shift Order No: _____
Revision: _____
Effective Date: _____
Expiration Date: _____
Page: _____

Subject: _____

Information and Administrative Instructions:

Approved by: _____
Facility Manager — Date

REVIEWED FOR CLASSIFICATION
BY: _____
DATE: _____

APPENDIX 16

Operator Aid Postings Log

LOG NO.	POSTING INFORMATION: (*include posting type and content, and date of posting*)	LOCATION: (*be as specific as possible*)	SM APPROVAL: (*name, date, and initials*)	REFERENCE DOCUMENT: (*identify applicable technical documents including revision number*)

APPENDIX 17

Communications Guide

PHONETIC ALPHABET

A - Alpha	**J -** Juliett	**S -** Sierra
B - Bravo	**K -** Kilo	**T -** Tango
C - Charlie	**L -** Lima	**U -** Uniform
D - Delta	**M -** Mike	**V -** Victor
E - Echo	**N -** November	**W -** Whiskey
F - Foxtrot	**O -** Oscar	**X -** X-Ray
G - Golf	**P -** Papa	**Y -** Yankee
H - Hotel	**Q -** Quebec	**Z -** Zulu
I - India	**R.** Romeo	

PROWORDS

Terminology	Meaning
Copy or Roger	I understand
Wilco	I understand and will comply
Say again	I do not understand; repeat
Wrong	Information is incorrect
Correction	Correct information follows
Over	Used at the end of a message when the recipient is expected to answer or acknowledge
Out	End of message. Do not call back. (*used when no further communication is necessary*)

APPENDIX 18

Round Sheet Format

Page 1 of 4

OPERATIONS
OPERATIONS ORDER

Number: OO- -62
Revision: 10
Effective Date: 01/30/98
Expiration Date: 07/30/99
Page: 5 of 22

ATTACHMENT 2
BUILDING CONTROL ROOM LOG SHEETS
Page 1 of 5

CONTROLLERS / GAUGES	LIMITS	EQUIP. CHECK	ACTUAL READING			PROBLEMS / COMMENTS
			0000 TO 0800 Hrs.	0800 TO 1600 Hrs.	1600 TO 2400 Hrs.	
UCB NO. 1						
41-PDIC-301 G/B ZONE 1	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-302A G/B ZONE 2A	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-303 G/B ZONE 3	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-304 G/B ZONE 4	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-302B G/B ZONE 2B	MAX. 6.5 MIN. 3.5	IN. W.G.				
OY LEACH G/B ZONE 9	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-305 G/B ZONE 5	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-306 G/B ZONE 6	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-307 G/B ZONE 7	MAX. 6.0 MIN. 3.5	IN. W.G.				
41-PDIC-308 G/B ZONE 8	MAX. 5.5 MIN. 2.0	IN. W.G.				
PDIC-1020A	MAX. 11.5 MIN. 5.5	IN. W.G.				
PDIC-1020B	MAX. 11.5 MIN. 5.5	IN. W.G.				
41-PDIC-327 FN 3 & 4	MAX. 5.7 MIN. 4.7	IN. W.G.				
41-PDIC-328 FN 3 & 4	MAX. 5.7 MIN. 4.7	IN. W.G.				

APPENDIX 18

Round Sheet Format
Page 2 of 4

OPERATIONS
OPERATIONS ORDER

Number: OO- -62
Revision: 10
Effective Date: 01/30/98
Expiration Date: 07/30/99
Page: 9 of 22

BUILDING

ATTACHMENT 2
CONTROL ROOM LOG SHEETS
Page 5 of 5

New Deficiencies Identified (CIRCLE ONE):

0000 TO 0800 — YES / NO 0800 TO 1600 — YES / NO 1600 TO 2400 — YES / NO

Request Submitted In Accordance With 1-74000-IWCP-1, Work Control Program, for new deficiencies (CIRCLE ONE):

0000 TO 0800 — YES / NO 0800 TO 1600 — YES / NO 1600 TO 2400 — YES / NO

COMMENTS: _____

_____

_____

_____

_____

_____

Performed By: (2330 TO 0730)

SOE: _____ Date: _____ CCA/Designee: _____ Date: _____

Performed By: (0730 TO 1530)

SOE: _____ Date: _____ CCA/Designee: _____ Date: _____

Performed By: (1530 TO 2330)

SOE: _____ Date: _____ CCA/Designee: _____ Date: _____

Reviewed By:

CST Lead/Designee: _____ Date: _____

APPENDIX 18

Round Sheet Format
Page 3 of 4

OPERATIONS
OPERATIONS ORDER

Number: OO- -62
Revision: 10
Effective Date: 01/30/98
Expiration Date: 07/30/99
Page: 10 of 22

ATTACHMENT 3
BUILDING INSIDE ROUNDS
Page 1 of 6

EQUIPMENT / AREA	EQUIP. STATUS	LIMITS/ EXPECTED RESULT	ACTUAL READING 0000 TO 0800 Hrs.	ACTUAL READING 0800 TO 1600 Hrs.	ACTUAL READING 1600 TO 2400 Hrs.	PROBLEMS / COMMENTS
OUTSIDE AIR TEMP.	TEMPERATURE		°F	°F	°F	
S-13	VISUAL INSPECT.	ON	ON / OFF	ON / OFF	ON / OFF	
AHU-1	DISCH. TEMP.		°F	°F	°F	
STM. SPLY. PRESS.	PSIG	MIN. 85				
E-1 MAIN EXH. FAN	VISUAL INSPECT.		ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-2 MAIN EXH. FAN	VISUAL INSPECT.	$3 FANS	ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-3 MAIN EXH. FAN	VISUAL INSPECT.	MUST	ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-4 MAIN EXH. FAN	VISUAL INSPECT.	BE	ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-5 MAIN EXH. FAN	VISUAL INSPECT.	OPERABLE	ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
E-6 MAIN EXH. FAN	VISUAL INSPECT.		ON / OFF	ON / OFF	ON / OFF	LCO 3.1.1
AHU-2	VISUAL INSPECT.	ON	ON / OFF	ON / OFF	ON / OFF	
	DISCH. TEMP.		°F	°F	°F	
FAN	VISUAL INSPECT.	ON	ON / OFF	ON / OFF	ON / OFF	STEAM SECURED TO THE COILS —
S-8	DISCH. TEMP.		°F	°F	°F	DIRTY FILTERS
UPS	NORMAL POWER AVAIL. LIGHT	ON	ON / OFF	ON / OFF	ON / OFF	
ATS	EMER. POWER AVAIL. LIGHT	ON	ON / OFF	ON / OFF	ON / OFF	
UPS	UPS OUTPUT VOLTAGE	MAX. 130 MIN. 110		V		
	AC RESERVE VOLTAGE	MAX. 130 MIN. 110		V		
	INVERTER PHASE LOCKED LIGHT	ON	ON / OFF	ON / OFF	ON / OFF	
AHU-3	VISUAL INSPECT.	ON	ON / OFF	ON / OFF	ON / OFF	
	DISCH. TEMP.		°F	°F	°F	

APPENDIX 18

Round Sheet Format
Page 4 of 4

OPERATIONS
OPERATIONS ORDER

Number: OO- -62
Revision: 10
Effective Date: 01/30/98
Expiration Date: 07/30/99
Page: 15 of 22

ATTACHMENT 3
BUILDING INSIDE ROUNDS
Page 6 of 6

New Deficiencies Identified (CIRCLE ONE):

0000 TO 0800 — YES / NO 0800 TO 1600 — YES / NO 1600 TO 2400 — YES / NO

Request Submitted In Accordance With 1-74000-IWCP-1, Work Control Program, for new deficiencies (CIRCLE ONE):

0000 TO 0800 — YES / NO 0800 TO 1600 — YES / NO 1600 TO 2400 — YES / NO

COMMENTS: _____

_____

_____

_____

_____

_____

Performed By: (2330 TO 0730)

SOE: _____ Date: _____ CCA/Designee: _____ Date: _____

Performed By: (0730 TO 1530)

SOE: _____ Date: _____ CCA/Designee: _____ Date: _____

Performed By: (1530 TO 2330)

SOE: _____ Date: _____ CCA/Designee: _____ Date: _____

Reviewed By:

CST Lead/Designee: _____ Date: _____

APPENDIX 19

Inspection During Rounds Checks

Page 1 of 2

Inspection during rounds include, but are not limited to, the below listed items:

1. General Area

   (1) Satisfactory housekeeping and cleanliness; egress routes are not blocked
   (2) Electrical covers in place securely
   (3) Drain hoses in place securely
   (4) Insulation damage noted
   (5) Noise and vibration levels normal
   (6) Equipment and component labels installed and readable where required
   (7) Oil, steam, or water leakage noted, including roof in-leakage
   (8) Danger/caution/information tags securely in place
   (9) Combustible loading, radiological, or other safety problems noted and reported
   (10) Radiation and contamination postings clearly marked
   (11) Floor drains unblocked. Birms intact
   (12) Sump levels satisfactory
   (13) Ceiling tiles in place which impact sprinkler system operability
   (14) Inoperable lighting; doors with closure problems; fire doors closed as required
   (15) Uncontrolled operator aids noted

2. Electrical Panels

   (1) Breakers properly aligned
   (2) Indicating lights working
   (3) Abnormal odors
   (4) Electrical panel covers and doors in place securely

3. Transformers

   (1) Temperatures normal; no leaks

4. Local Control Panels

   (1) Alarms <u>not</u> annunciating, or alarms that are annunciating are expected
   (2) Recorders operating properly
   (3) Gauges, meters, and indicators within expected ranges
   (4) Indicating lights operable

APPENDIX 19

Inspection During Rounds Checks

Page 2 of 2

5. Safety Hazards

   (1) Gas cylinders secured, with caps installed if bottle not connected
   (2) Water leakage around energized equipment
   (3) Walking surfaces free of water or oil
   (4) Scaffolds, temporarily stored materials, or ladders do not create a hazard

6. Equipment Checks

   (1) Glove boxes (*leaks or other abnormal conditions*)
   (2) Motor and pump housing temperatures and vibration normal
   (3) Noise levels normal
   (4) Belt tightness
   (5) Ground straps in place
   (6) Coupling guards in place
   (7) Fluid leakage wiped-up
   (8) Ventilation intakes clear
   (9) Equipment lube oil normal
   (10) Burned-out light bulbs

7. Wires and Cables

   (1) Hold-down straps secure

8. Doors

   (1) Closed and locked as required
   (2) Fire doors working properly

9. Building Exterior

   (1) Lighting
   (2) Walkways and ladders clear
   (3) Ice and snow cleared
   (4) No water hammers or leaks observed on steam and condensate lines
   (5) Safety hazards (*ladders, potholes, unsecured loads, elevated work in high wind*)

APPENDIX 20

Surveillance Intervals

SURVEILLANCE	Interval Between 2 Consecutive Surveillances NOT TO EXCEED	Interval Between 4 Consecutive Surveillances NOT TO EXCEED
Shiftly (8 hours)	10 hours	26 hours
Daily (24 hours)	30 hours	78 hours
Weekly (7 days)	9 days	23 days
Monthly (30 days)	37 days	14 weeks
Bi-Monthly (60 days)	74 days	28 weeks
Quarterly (13 weeks)	16 weeks	42 weeks
Semi-Annually (6 months)	32 weeks	84 weeks
Annually (12 months)	15 months	39 months
Biennially (24 months)	30 months	78 months
Triennially (36 months)	45 months	117 months
Four (4) Years (48 months)	60 months	156 months
Five (5) Years (60 months)	75 months	195 months
Decade (120 months)	150 months	390 months
Periodically: The absolute interval specified in the OSR/TSR	N/A	N/A

These surveillance intervals are to be used in determining an LCO surveillance or compensatory measure due dates, unless otherwise specified in the Authorization Basis for the facility.

APPENDIX 21

Compliance Tracking Information Guide

Compliance Tracking Forms contain the following information, at a minimum:

- Surveillance title and description as stated in the OSR/TSR
- Related USQD, EOE, or JCO which requires the compensatory measures
- Building number
- Equipment name and/or number
- Procedure identification
- Out-of-tolerance: Yes No
- Comments
- Integrated Work Control Form submitted: Yes No
- The time the surveillance was performed (*24-hour time*)
- Surveillance frequency
- Performing group
- Performed by
- Date of surveillance
- Appropriate Compliance Tracking Number
- Compliance Tracking Coordinator signature
- Shift Manager's Review signature

APPENDIX 22

Caution Tag Log or Information Tag Log

Tag No.	Device Description/ Location	Special Instructions	Installation				Removal			
			Approved By:	Date	Installed By:	Date	Approved By:	Date	Removed By:	Date

APPENDIX 23

Caution Tag

Caution Tags have the content and format indicated using black letters on a yellow background

TAG NO. 08400

CAUTION

DO NOT OPERATE THIS EQUIPMENT UNTIL SPECIAL INSTRUCTIONS ON REVERSE SIDE ARE THOROUGHLY UNDERSTOOD

DEVICE DESCRIPTION/LOCATION:

_____

_____

_____

_____

Approved By_____ Date_____

Installed By_____ Date_____

DO NOT REMOVE THIS TAG

RF-47896 (2/93) ★GPO 775-336

CAUTION

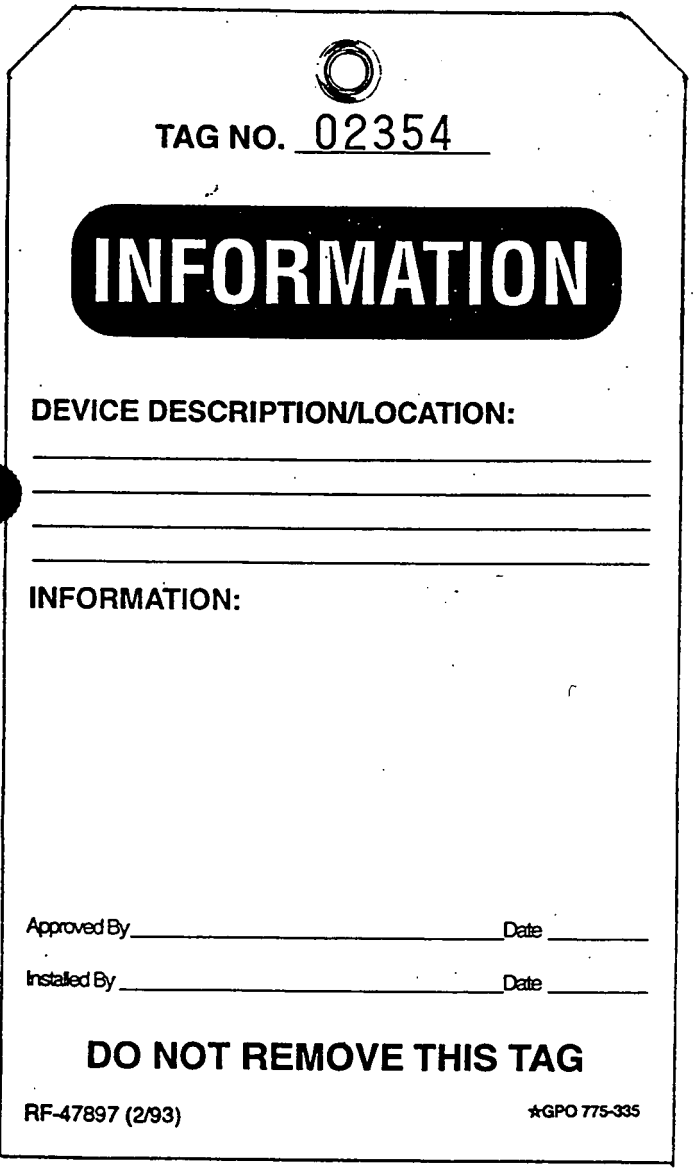
DO NOT OPERATE THIS EQUIPMENT UNTIL SPECIAL INSTRUCTIONS BELOW ARE THOROUGHLY UNDERSTOOD

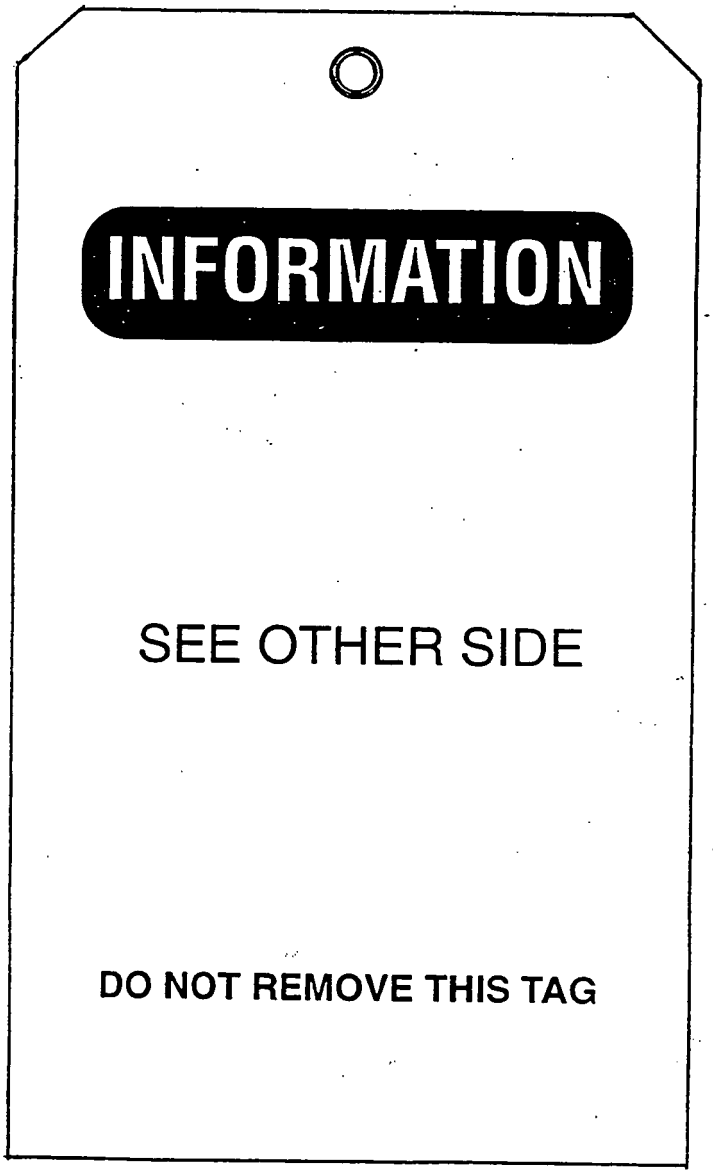
SEE OTHER SIDE

APPENDIX 24

Information Tag

Information Tags have the content and format indicated using blue letters on a white background





APPENDIX 25

Technical Concern Assessment Checklist

Page 1 of 2

A. Technical Concern No.: _____

B. Description of the Condition or Deficiency: _____

_____

_____

_____

_____

_____

_____

C. Safety SSC Deficiency Review:

NOTE: *If this Technical Concern Assessment Checklist is being used for asking questions or obtaining a clarification of an EOE, N/A is checked for Questions 1 through 3.*

1. Does an identified deficiency affect the performance of the Safety SSC or its capability to meet its intended function:

   [ ] Yes [ ] No [ ] N/A

2. Does the deficiency impact the ability of a Safety SSC to successfully meet an LCO or LCO surveillance requirement?

   [ ] Yes [ ] No [ ] N/A

3. Is the impact of a deficiency uncertain?

   [ ] Yes [ ] No [ ] N/A

If Yes is checked for 1, 2, or 3 above, mark Engineering Operability Evaluation (EOE) initiated under Paragraph E below (*follow-up actions*). If No is checked for Questions 1, 2, and 3, complete D, (*Technical Concern Resolution*) and E (*follow-up actions*).

D. Technical Concern Resolution

Actions taken or resolutions, as appropriate: _____

_____

_____

APPENDIX 25

Technical Concern Assessment Checklist

Page 2 of 2

E. Follow-up Actions

[ ] No Action Required

[ ] EOE or SES/USQD Initiated — EOE/SES/USQD #: _____

[ ] JCO Initiated — JCO #: _____

[ ] Technical Operations Order *Initiated to implement the* remedial/required action — Techinical Operations Order #: _____

Person Completing Checklist _____
Date

Facility Manager Checklist Review _____
Date

Engineering Manager (*or equivalent manager*) Checklist Review _____
Name Date

Comments: _____

APPENDIX 26

System Return-to-Service and Operability Checklist

Page 1 of 2

System/Equipment/Component: _____

Date: _____ Facility: _____

1.	If a system was declared inoperable due to an administrative deficiency or a nontermination violation that did not challenge the safety basis as evaluated by: 1-C10-NSM-04.03 or equivalent company procedure • *Verify that the deficiency has been corrected* • Skip to Step 8	Initials	Date
2.	*Appropriate work and post-maintenance testing have been completed*	Initials	Date
3.	Necessary support systems are in service	Initials	Date
4.	The system or equipment is lined-up and/or configured for operations in accordance with the applicable operating procedure	Initials	Date
5.	For modifications: (Mark N/A and initial if no modifications were performed)		
5.a	The Baseline Document Change Form (BDCF) is complete in accordance with: 1-V5-COEM-210, Baseline Document Change Process, indicating receipt of the required drawings in the applicable facility	Initials	Date
5.b	The required procedures have been issued or revised, as necessary, and appropriate personnel have been briefed or trained	Initials	Date
6.	The appropriate component alignment has been completed in accordance with Section 7.H.	Initials	Date
7.	Any remaining deficiencies, NCRs, compensatory measures, remedial/required actions, USQDs, JCOs, EOEs, and ADRs affecting the system are listed below and have been dispositioned _____ _____ _____ _____ _____	Initials	Date

APPENDIX 26

System Return-to-Service and Operability Checklist

Page 2 of 2

8.	All appropriate OSR/TSR surveillances and/or post maintenance testing, required for the item to be declared operable, have been completed	Initials	Date

System in service (Items 1 and 8)	Shift Manager	Date
Safety SSC is operable (Items 1 through 8)	Shift Manager	Date
Concurrence that the operability declaration is acceptable	Responsible Engineer	Date
Service and operability declaration is noted	Facility Manager	Date

9.	The facility status and Shift Manager's Log updated	Initials	Date
10.	Any applicable Operations Orders are updated or canceled, as necessary	Initials	Date

APPENDIX 27

Material-at-Risk (MAR) Limits for Non-LCO Affected Operations

Page 1 of 4

The following MAR limits are to be used to define activities which may be considered as non-LCO affected operations. These limits are to be used for the purpose of allowing low-hazard activities to be performed in facilities which are not fully compliant with the applicable Authorization Basis document. If the activity-related MAR exceeds the specified value in Table 27-1, MAR Limits, the activity can only be conducted when the facility is fully compliant with its OSR/TSR, or an applicable JCO covering the routine activity is in place.

Activity-related MARs should be determined conservatively. For example, if a glovebox is to be entered, the MAR should include the entire inventory (*including holdup in the associated ducting*) of the glovebox, unless partitioning of the glovebox inventory due to the size of the glovebox or physical barriers within the glovebox can be technically justified. Similarly, if the solution in a tank is to be sampled or moved, the entire inventory of the tank is included in the MAR. When assessing an activity for MAR, the entire evolution shall be considered, not individual steps of the activity. For example, if the activity is to move ten drums of SNM, the entire ten drums would be included in the assessment to determine the MAR involved.

When container contents are uncertain, activity MARs should be determined accounting for this uncertainty. If the MAR is not characterized in any fashion, form, or quantity, the activity should be considered an LCO-affected operation. The following additional requirements must be met in order to define an activity as a non-LCO-affected operation:

- Immediate worker controls must be in place to adequately protect the worker. The determination that an activity is a non-LCO-affected operation does not relax any immediate worker safety requirements.

- Activities must be assessed for explosion potential. Any activity that has explosion potential must have an independent evaluation by Nuclear Safety to determine if the activity is an LCO-affected operation or a non-LCO-affected operation.

- If an activity is defined as a non-LCO-affected operation utilizes the fire-precluded MAR limits, documented justification for fire being precluded during the activity must be developed and included with the implementing work instructions.

APPENDIX 27

Material-at-Risk (MAR) Limits for Non-LCO Affected Operations

The following activities have previously been defined as non-LCO-affected operations and do not have to meet the MAR limits of Table 27-1.

- Movement of sealed sources or non-dispersible radioactive materials

MAR PARAMETERS

Form of Material

Chips - Pieces similar to Radioactive Metal, except that the pieces are much smaller, such as turnings, lab samples, coupons, or unsealed sources.

Confined Materials - Materials (*such as wastes*) in sealed containers (*such as drums*). It is assumed that the accident breaches the container (*as with a puncture or a fire that pops a lid*), and a plume of material is released. The majority of the material remains in the container, however.

High Efficiency Particulate Air (HEPA) Filters - HEPAs that are in a plenum, not in a waste container. If the HEPA filters are in a sealed container, the category Confined Materials is used.

Nonvolatile Liquid - Form of material used for aqueous liquids, such a radiologically contaminated water, acid or caustic solutions. Plutonium nitrate and uranyl nitrate solutions fall into this category.

Powder - Finely divided materials, such a plutonium or uranium oxide powders. The accident could be powder pouring out of a container, or exposed powder in a fire, or exposed powder subjected to an explosion.

Radioactive Metal - Bare metal pieces, such as ingots, castings, and briquettes. This form of material is not used with a spill scenario, since no plume of material would be released if a piece of bare metal were to fall.

APPENDIX 27

Material-at-Risk (MAR) Limits for Non-LCO Affected Operations

Resin Material - Resin beads in an ion column or in the plastic bottles used for transferring the beads to the cementation area. Includes dry and wet resins.

Unconfined Combustible Material - Combustibles (*such as paper, wood, or cloth*) that are fully exposed to the fire (*for example, contaminated waste in unsealed drums or on a glovebox floor*).

Unconfined Noncombustible Material - Contaminated walls, floors, metal surfaces, and other open-to-the-air noncombustible surfaces (*including surface contamination in a glovebox or exhaust duct*).

Volatile Liquid - Radiologically contaminated liquid that vaporizes readily at room temperature, such as an organic liquid. Solvents often fall into this category.

Material

Depleted Uranium - Standard isotopic mix of depleted uranium given in the Rocky Flats Risk Assessment Guide, and used in the FSAR Analysis.

High-Americium Residues - Residues having Item Description Codes (IDCs) 405 through 410 and 427 or other Americium-bearing materials that have less than 9 weight-percent Americium. Include the sum of all actinides.

High Enriched Uranium (HEU) - Standard isotopic mix of highly enriched uranium given in the Rocky Flats Risk Assessment Guide and used in the FSAR analysis.

Low Enriched Uranium (LEU) - Uranium enriched less than 4.5% U-235

Weapons-Grade Plutonium (WGPu) - The form of Plutonium (Pu) used in the FSAR, aged for about 70 years, which increases the AM-241 content and decreases the PU-241 content.

APPENDIX 27

Material-at-Risk (MAR) Limits for Non-LCO Affected Operations

If multiple limits are presented in the table, the first limit applies to situations where fire is not precluded and the second limit applies to situations where fire is precluded. Criticalities are precluded by the proposed MAR limits. Activities that can lead to explosions must be evaluated on a case-by-case basis as indicated above.

TABLE 27-1
MAR LIMITS

Form	Aged WGPu	HEU	LEU	DU	Am*	Unknown
Confined	9.9g 50g	700g	700g	9.4 MT 47 MT	2.1g 10g	2.1g 10g
Unconfined Non-Combustible	7.1g	700g	700g	4.7 MT	1.0g	1.0g
Unconfined Combustible	0.14g 14g	505g 700g	700g	94 kg 4.7 MT	0.021g 1.0g	0.021g 1.0g
HEPA Filters	14g	700g	700g	9.4 MT	2.1g	2.1g
Radioactive Metal	28g 450g Clad	700g	700g	19 MT *unlimited if Clad*	4.2g	4.2g
Powder	12g	700g	700g	7.9 MT	1.7g	1.7g
Chips	0.71g	700g	700g	0.47 MT	0.10g	0.10g
Resin	0.62g 5.0g	700g	700g	0.59 MT 4.7 MT	0.13g 1.0g	0.13g 1.0g
Volatile Liquid	0.071g 124g	361g 700g	700g	67 kg 118 MT	0.015g 26g	0.015g 26g
Non-Volatile Liquid	2.5g 124g	700g	700g	2.4 MT 118 MT	0.52g 26g	0.52g 26g
Unknown	0.071g 5.0g	361g 700g	700g	67 kg 4.7 MT	0.015g 1.0g	0.015g 1.0g

MT = Metric Tons
kg = kilograms
g = grams

* *This applies to IDCs 405, 406, 407, 408, 409, 410, 427, or any Am enriched IDC that contains less than 9 weight-percent Am. The listed gram value is the sum of all actinides.*

APPENDIX 28

Resumption of LCO-Affected Operations Following an Authorization Basis Violation

Contractor/Facility: _____/_____
Facility Manager: _____
Point of Contact: _____
IMC Approval Individual: _____

Date: _____
Occurrence Report No.: _____
Date of Occurrence: _____

Description of Authorization Basis Violation:

_____

_____

_____

Immediate Action:

_____

_____

_____

Preliminary Root Cause[1]:

_____

_____

_____

Short-Term Corrective Actions	Due Date/Status

Signatures:

_____ _____
Facility Manager Date

_____ _____
Independent Safety Review Date

_____ _____
IMC Division Manager/Designee Date

[1]MAN-062-CAUSE ANALYSIS

APPENDIX 29

Component Alignment Checklist

COMPONENT ALIGNMENT CHECKLIST

Page 1 of ____

System/Subsystem _____ Reference Procedure _____

Component ID/Description	Required Position	Actual Position	Positioner 1st Checker Initials	2nd Checker Initials

POSITIONER/1st CHECKER	2nd CHECKER	REVIEWED BY SM:
Name: _____ Signature: _____ Title: _____ Date/Time St.: _____ Date/Time Comp.: _____	Name: _____ Signature: _____ Title: _____ Date/Time St.: _____ Date/Time Comp.: _____	Name: _____ Signature: _____ Title: _____ Date/Time: _____

DEFICIENCIES: Operator completes Component ID/Description and Deficiencies blocks below.
Shift Manager completes Corrective Action block below.

Component ID/Description	Deficiencies	Corrective Action	Complete/Initials

APPENDIX 30

Techniques for Use in Component Alignment/and Independent Verification

Valves

NOTE

Relative height of a valve stem is not used as the sole determinant of a valve's position.

The appropriate technique for the valve type being verified should be used. Some techniques may not be appropriate due to a particular make, model, or type of valve (physical construction). The vendor manual or the responsible engineer should be consulted if there is any doubt about the correct verification technique to be used. The techniques in this Appendix apply to all forms of position checking, whether in IV, conducting lineups, or just checking a single item to ensure it is in the correct position.

To verify valves OPEN (*does not apply to throttled valves*):

- manipulate the valve in the CLOSED direction only as much as necessary to remove any slack from the operating mechanism, and verify valve stem movement
- open the valve fully, subject to normal precautions on back-seating valves

To verify valves CLOSED:

CAUTION

Use of excessive force to close a valve could damage the valve seat.

Opening a valve that is being verified in the CLOSED position could unintentionally release fluid or pressurize piping and other components.

APPENDIX 30

Techniques for Use in Component Alignment/and Independent Verification
Page 2 of 4

- manipulate the valve in the CLOSED direction only as much as necessary to verify the valve is fully closed, and not binding or difficult to operate

- do not manipulate valves or ventilation dampers that have been set in throttled positions based on flow requirements. Verify position by visual methods only

To verify position of a throttled valve:

CAUTION

When operation of a throttled valve is necessary to determine position, it is likely that movement will negate the original throttled position and give no additional assurance of obtaining the correct position. Therefore, throttle valves should not be moved without specific direction from the Shift Manager

- if necessary to operate a throttled valve to determine position, use two independent checkers to determine if the valve was in the correct throttled position, and is correct when returning the valve to the desired throttled position

- manipulate the valve in the CLOSED direction, counting the number of turns to fully close the valve, and open the valve to its required throttled position

- if system or process operating conditions prohibit closing a throttled valve to verify its position and the act of fully opening the throttled valve will not unduly upset the system or process, use the number of turns throttled closed from full OPEN instead of the normal method of counting the turns OPEN from fully CLOSED

APPENDIX 30

Techniques for Use in Component Alignment/and Independent Verification
Page 3 of 4

To verify Motor Operated Valves (MOVs) and Air Operated Valves (AOVs):

CAUTION

Operability of an MOV that has been manually operated is not guaranteed. Manually positioning an MOV may result in failure of the valve to respond to a Remote Actuation Signal (that is, possible overtorquing due to manual operation).

- report any MOV that has been manually operated to the SM
- when verifying MOVs or AOVs, use all available means of valve position indication, such as:
  - when remote operating switches are used, verify that the switch is in the correct position
  - when remote indicating lights are used, verify that the lights reflect the correct position
  - when local valve position indicators are used, verify that the local indicator (*on the valve/valve operator*) indicates the correct position

Circuit Breakers

To verify circuit breakers:

- verify the local operating selector switch is in the correct *position (for example, local or remote*)

APPENDIX 30
Techniques for Use in Component Alignment/and Independent Verification

- if accessible, qualified personnel verify that breaker power fuses are installed
- use local indicator lights, when provided, to verify that the breaker has power and is in the correct position
- if the breaker is racked in, use the charging spring indicator, when provided, to verify that the operating spring is charged
- verify that the breaker is in the correct position and that the cubicle door is in good condition with all fasteners tight
- verify that the breaker is locked in the proper position, if required, and status lights are appropriate for that position

APPENDIX 31

Alarm Deactivation Request (ADR)

Page 1 of 2

ALARM DEACTIVATION REQUEST		ADR No.: _____
ORIGINATOR	Type of Alarm:	Identification No.:
	Building: Location: System: Drawing No.: Lockout/Tagout No.:	**Planned Deactivation Period** from: _____ Time/Date to: _____ Time/Date
	Reason for Deactivation (*use numbered attachment pages as necessary*):	
	Initiating Documents (*IWCP WP, NCRs, etc.*):	
	Is this alarm Safety SSC related? [ ] Yes [ ] No Is the alarm an LCO requirement? [ ] Yes [ ] No List the required OSR/TSR remedial/required actions, if any: *Attach a copy of the Safety Evaluation Screen*	

DEACTIVATION

Concurrence:

_____ Date
Manager Responsible for the Item

_____ Date
Facility Engineering Manager

APPROVAL FOR DEACTIVATION:

_____ Date
Shift Manager

ALARM DEACTIVATED:Time/Date: _____

_____ Date
Shift Manager

REACTIVATION

ALARM REACTIVATED:Time/Date: _____

_____ Date
Shift Manager

APPENDIX 31

Alarm Deactivation Request (ADR)

Page 2 of 2

Instructions for Completing Alarm Deactivation Request

The originator provides primary reference information. All line items should be completed and double checked prior to submitting the request for approval.

1. Determine type of alarm (*Safety SSC item or other item*). If the alarm is classified as Safety SSC item, the public and/or environment may be at risk by deactivating the alarms. Any questions concerning alarm classification should be discussed with Facility Manager and the Engineering Manager for the facility.
2. Provide building number.
3. Provide location, including such non-work areas as locker room or entryway.
4. Provide system name for which the alarm is a part (*for example, Life Safety/Disaster Warning System*).
5. When engineered compensatory measures are required, provide drawing number. When drawing number is not required, mark this item N/A.
6. If a lockout/tagout will be used to deactivate the alarm, provide the lockout/tagout number. If lockout/tagout is not used, mark this item N/A.
7. Provide identification number located on the alarm.
8. Provide planned deactivation period. This will be from the planned deactivation time/date to the reactivation time/date.
9. Provide a brief but complete description of the reason for alarm deactivation.
10. List all documents that provide the reason for and/or direct deactivation of the alarm.
11. If alarms is classified as Safety SSC, determine if alarm is required by LCOs.
12. Provide compensatory measures if required. Concurrence and approval are required prior to deactivation of the alarm.
13. Responsible manager concurrence is required for deactivation of all alarms.
14. If the alarms is classified as Safety SSC, Facility Engineer concurrence is required. For all other types of alarms, mark this concurrence N/A.
15. Approval is granted by the Shift Manager with verbal concurrence of the Facility Manager.
16. ADR number is assigned by Shift Manager after approval and is then documented in header block of ADR (*at the top*).
17. When the alarm is deactivated, the Shift Manager's signature, time, and date are recorded.

Reactivation documents returning alarm to service:

18. Shift Manager approval is required prior to reactivation.

APPENDIX 32

Deactivated Alarm Log

DEACTIVATED ALARM LOG

Page: _____
Building: _____

ADR Number	Identification Number	Location	Actual Deactivation Time / Date	SM's Initials	Actual Reactivation Time / Date	SM's Initials	Comments

INSTRUCTIONS FOR COMPLETING DEACTIVATED ALARM LOG

1. Print building number, and page number at top of each page.
2. Copy ADR number from ADR.
3. Copy alarm identification number, location, and actual deactivation time/date from ADR, and enter Shift Manager's initials.
4. Use Comments Section to document corrective actions and special problems, such as unavailable parts, scheduling delays, or other information.
5. When alarm is reactivated:
   a. enter actual reactivation time/date.
   b. after verification that alarm has been reactivated, Shift Manager initials in section provided.

APPENDIX 33

DOE Order 5480.19 Crosswalk Matrix

Page 1 of 16

DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 1, Operations Organization and Administration		
C.1 Operations Policies	COOP 001, Sections 4,5 COOP 002-017, Section 4 in each COOP 020, Section 4	COOP Sections 2, 3.A, 4.A Kaiser-Hill Policy Manual RFETS Security Manual Master Safeguards and Security Agreement (MSSA)
C.2 Resources	COOP 001, Sections 4.4.2.3, 4.4.2, and 5.2	COOP Sections 2.F, 6.A, 6.B
C.3 Monitoring of Operating Performance	COOP 001, Sections 4.4, 4.5, 4.7 Sections 5.1, 5.3, 5.6 COOP 002 COOP 012, Section 5.3 1-G64-ADM-21.01 QA Surveillance 1-A65-ADM-15.01 Control of Non-Conforming Items 1-A65-ADM-15.03 Deficiency Report System 1-74000-IWCP-TOC Deficiency Control Procedure 1-C78-ADM-16.05 Implementation of Lessons Learned 1-11000-ADM-16.06 Conduct of Critiques	COOP Sections 2.E, 2.F, 2.G, 2.H, 2.I, 5.G, 5.H 1-D97-ADM-16.01 Occurrence Reporting Process Corrective Action Procedures Manual 1-MAN-013-SIOM Site Integrated Oversight Manual
C.4 Accountability	COOP 001, Sections 4.4, 5.1 Performance Review System	COOP Section 2.E Kaiser-Hill Team Standards of Conduct; Performance Review System
C.5 Management Training	COOP 001, Section 5.2.3 Training User's Manual (TUM)	COOP Section 6.C Training User's Manual (TUM)
C.6 Planning for Safety	COOP 001, Section 5.1.7 COOP 011, Section 5.3 HSP Manual 2.03, 5.01	COOP Sections 2, 4.A, 4.B-C HSP Manual 2.03, 5.01 Integrated Safety Management System Manual Nuclear Safety Manual, 1-NSM

APPENDIX 33

DOE Order 5480.19 Crosswalk Matrix

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 2, Shift Routines and Operating Practices		
C.1 Status Practices	COOP 001, Section 5.4 COOP 004, Sections 4, 5 COOP 005, Section 6 COOP 012, Sections 4, 5	COOP Sections 2, 5.B, G, 7.A, B, F, H, I, J
C.2 Safety Practices	COOP 001, Section 5.1 COOP 012, Section 5.2 HSP Manual	COOP Sections 4.A, 4.B, 4.C COOP Appendix 19 HSP Manual ISMS Manual
C.3 Operator Inspection Tours	COOP 001, Section 5.3.8 COOP 001, Section 4.5.5 COOP 006, Section 5.2 COOP 007, Section 5 COOP 012, Section 5	COOP Sections 2.G, I, J, 4.D, 5.B, G
C.4 Round/Tour Inspection Sheets	COOP 001, Section 5.3.8 COOP 006, Section 5.2 COOP 007, Section 5.2 COOP 012, Section 5.1, 5.3	COOP Section 5.G COOP Appendix 19
C.5 Personnel Protection	COOP 001, Sections 4.5, 5.1, 5.2 COOP 011 COOP 016, Section 5.1 HSP Manual	COOP Sections 2.I, 2.J, 4.A, 4.C HSP Manual Training User's Manual (TUM) RadCon Manual
C.6 Response to Indications	COOP 001, Sections 5.4.4	COOP Sections 7.I, J, K
C.7 Resetting Protective Devices	COOP 001, Section 5.4.13	COOP Section 7.M
C.8 Load Changes	Not Applicable	Not Applicable
C.9 Authority to Operate Equipment	COOP 001, Sections 4.4, 4.5, 5.3, 5.4, 5.6 Training User's Manual (TUM)	COOP Sections 2.G, 4.C, 4.E, 4.J

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 2, Shift Routines and Operating Practices (Continued)		
C.10 Shift Operating Bases	COOP 001, Section 5.3.3.8 COOP 004 COOP 007	COOP Sections 4.D, 5.B
C.11 Potentially Distractive Written Material and Devices	COOP 001, Sections 4.5.3, 5.3.3.9	COOP Section 4.D
Chapter 3, Control Area Activities		
C.1 Control Area Access	COOP 001, Section 5.3.3.8	COOP Section 4.D
C.2 Professional Behavior	COOP 001, Sections 5.1.3, 5.3.3.8, 5.3.3.9	COOP Sections 4.D, 4.J
C.3 Monitoring the Main Control Boards	COOP 001, Sections 5.3, 5.4, 5.6	COOP Sections 2.J, 4.D, 7.I, J, K
C.4 Control Operator Ancillary Duties	COOP 001, Sections 4.5.3, 4.6.3	COOP Section 4.D
C.5 Operation of Control Area Equipment	COOP 001, Section 5.3.3.4 COOP 003, Section 5.4 Training User's Manual	COOP Sections 1.B, 6.C
Chapter 4, Communications		
C.1 Emergency Communications System	COOP 001, Sections 4.4.6, 4.5.2 COOP 015 EPLAN-94 (RFETS Emergency Plan)	COOP Section 5.F

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 4, Communications (Continued)		
C.2 Public Address System	COOP 015, Section 4.1, 5.5.3 EPLAN-94	COOP Section 5.F
C.3 Contacting Operators	COOP 001, Section 5.3.6 COOP 015, Section 5 EPLAN-94	COOP Section 5.F
C.4 Radios	COOP 015, Section 5.5.2 EPLAN-94	COOP Section 5.F
C.5 Abbreviations and Acronyms	COOP 015, Section 5.1	COOP Section 5.F
C.6 Oral Instructions and Informational Communication	COOP 001, Section 5.3.6 COOP 015, Sections 5.3, 5.5	COOP Section 5.F COOP Appendix 17
Chapter 5, Control of On-Shift Training		
C.1 Adherence to Training Programs	COOP 001, Section 5.2 COOP 003, Control of On-Shift Training EPLAN-094 (RFETS Emergency Plan)	COOP Section 6.C Training User's Manual (TUM)
C.2 On-Shift Instructor Qualifications	COOP 003, Sections 4.1, 4.2, 4.5, 5.1 Training User's Manual (TUM)	COOP Section 6.C Training User's Manual (TUM)
C.3 Qualified Operator Supervision and Control of Trainees	COOP 003, Sections 4.1, 4.3, 5.3, 5.4, 5.5 COOP 012, Section 5.3.2 Training User's Manual (TUM)	COOP Section 6.C
C.4 Operator Qualification Program Approval	COOP 001, Section 5.2.3 COOP 003, Section 4.1 Training User's Manual (TUM)	COOP Section 6.C Training User's Manual (TUM)

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Chapter 5, Control of On-Shift Training (Continued)		
C.5 Training Documentation	COOP 003, Sections 5.6, 6.1 Training User's Manual (TUM)	COOP Section 6.C Training User's Manual (TUM)
C.6 Suspension of Training	COOP 001, Section 5.3.3.4.4 COOP 003, Section 5.5.1	COOP Section 6.C
C.7 Maximum Number of Trainees	COOP 003, Section 5.4.4 Training User's Manual (TUM)	COOP Section 1.F COOP Section 6.C
Chapter 6, Investigation of Abnormal Events		
C.1 Events Requiring Investigation	COOP 001, Sections 5.6.1, 5.6.2, 5.6.3 1-D97-ADM-16.01 Occurrence Reporting Process 1-11000-ADM-16.03 Cause Analysis 1-C78-ADM-16.05 Implementation of Lessons Learned 1-11000-ADM-16.06 Conduct of Critiques	1-D97-ADM-16.01 COOP Section 4.E COOP Section 1.G COOP Section 1.H *For Nuclear Facilities*: 1-MAN-022-PAAAPROG Price-Anderson Amendments Act Program Manual
C.2 Investigation Responsibility	COOP 001, Sections 4.4, 4.5, 5.6.2, and 5.6.3	1-D97-ADM-16.01 MAN-062-CAUSE ANALYSIS
C.3 Investigator Qualification	COOP 001, Section 5.6.3 1-D97-ADM-16.0 1-11000-ADM-16.0 1-11000-ADM-16.06	1-D97-ADM-16.01 MAN-062-CAUSE ANALYSIS
C.4 Information to be Gathered	COOP 001, Section 5.6.3 1-15200-EPIP-04.01 Emergency Classification 1-D97-ADM-16.01 1-11000-ADM-16.03 1-C78-ADM-16.05 1-11000-ADM-16.06	1-D97-ADM-16.01 MAN-062-CAUSE ANALYSIS

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 6, Investigation of Abnormal Events (Continued)		
C.5 Event Investigation	COOP 001, Section 5.6.3 1-D97-ADM-16.01 1-11000-ADM-16.03 1-C78-ADM-16.05 1-11000-ADM-16.06	1-D97-ADM-16.01 MAN-062-CAUSE ANALYSIS
C.6 Investigative Report	1-D97-ADM-16.01 1-11000-ADM-16.03 1-C78-ADM-16.05 1-11000-ADM-16.06	1-D97-ADM-16.01 MAN-062-CAUSE ANALYSIS *For Nuclear Facilities*: 1-MAN-022-PAAAPROG
C.7 Event Training	COOP 001, Sections 5.6.2, 5.6.3 COOP 003, Section 5.3.3	COOP Section 1.F 1-MAN-017-LLGI-RM Site Lessons Learned/Generic Implications Requirements Manual
C.8 Event Trending	1-D97-ADM-16.01 1-11000-ADM-16.03 1-C78-ADM-16.05	COOP Section 1.F 1-E93-ADM-16.18 Data Analysis and Trending for Performance Improvement *For Nuclear Facilities*: 1-MAN-022-PAAAPROG
C.9 Sabotage	Safeguards and Security Program Master Safeguards and Security Agreement (MSSA) Site Security Manual Protective Force Security Emergency Response Plan	RFETS Emergency Plan (EPLAN-97) and Building Emergency Plans

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 7, Notifications		
C.1 Notification Procedures	COOP 001, Sections 5.6.2, 5.6.3 1-D97-ADM-16.01	COOP Section 1.G, 5.F 1-D97-ADM-16.01 RFETS Emergency Plan (EPLAN-97) and Building Emergency Plans Emergency Classification and Protective Actions 1-PRO-T56-EP-04.00
C.2 Notification Responsibility	COOP 001, Sections 4.4.6, 4.5.5 1-D97-ADM-16.01	COOP Section 5.F 1-D97-ADM-16.01 RFETS Emergency Plan (EPLAN-97) and Building Emergency Plans 1-PRO-T56-EP-04.00, Emergency Classification and Protective Actions
C.3 Names and Phone Numbers	COOP 001, Section 5.2.1.5 1-D97-ADM-16.01	COOP Section 5.F RFETS Emergency Plan (EPLAN-97) and Building Emergency Plans 1-PRO-T56-EP-04.00, Emergency Classification and Protective Actions
C.4 Documentation	COOP 001, Section 5.6.3 1-D97-ADM-16.01	COOP Section 5.F, 5.G 1-D97-ADM-16.01 RFETS Emergency Plan (EPLAN-97) and Building Emergency Plans 1-PRO-T56-EP-04.00, Emergency Classification and Protective Actions
C.5 Communication Equipment	COOP 015, Sections 5.5, 5.6	COOP Section 5.F RFETS Emergency Plan (EPLAN-97) and Building Emergency Plans

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 8, Control of Equipment and System Status		
C.1 Status Change Authorization and Reporting	COOP 001, Sections 4.5, 5.4 COOP 007 COOP 011 COOP 020	COOP Sections 2.G, 2.J, 4.B,C, 5.B,F, 7.A,B,F,G,K,L
C.2 Equipment and System Alignment	COOP 001, Section 5.4 COOP 004, Section 5.4 COOP 006 COOP 014	COOP, Sections 7.A, 7.H
C.3 Equipment Locking and Tagging	COOP 001, Section 5.4.8 Health and Safety Practices Manual HSP 2.08	COOP Section 7.D HSP 2.08
C.4 Operational Limits Compliance	COOP 001, Section 5.4 COOP 005, Authorization Bases Tracking COOP 006 COOP 007 COOP 020, Termination of Operations	COOP Section 7.C COOP Section 1.G COOP Section 7.G COOP Section 5.B COOP Section 5.G
C.5 Equipment Deficiency Identification and Documentation	COOP 001, Section 5.4.9 1-74000-IWCP Deficiency Report and Work Request Procedure COOP 008	COOP Sections 4.D, 5.B, G, H, 7.A, D, G, L 1-74000-IWCP TOC Integrated Work Control Program Manual
C.6 Work Authorization and Documentation	COOP 001, Sections 4.5, 5.4 COOP 016 1-74000-IWCP	COOP Sections 2.G, 4.A, 4.B, 7.A
C.7 Equipment Post Maintenance Testing and Return to Service	COOP 001, Section 5.4 1-74000-IWCP 1-90953-CCCP Configuration Change Control Process	COOP Section 7.G 1-7400-IWCP-TOC Integrated Work Control Program Manual
C.8 Alarm Status	COOP 001, Section 5.4 COOP 004 COOP 012 COOP 017	COOP Section 7.L

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 8, Control of Equipment and System Status (*Continued*)		
C.9 Temporary Modification Control	COOP 006, Section 5.4 2-D16-COEM-DES-207 Conduct of Engineering Manual 1-90953-CCCP	COOP Section 4.F
C.10 Distribution and Control of Equipment and Systems Documents	COOP 001, Section 5.4 1-77000-DC-001 Document Control Program	MAN-001-SDRM Conduct of Engineering Manual MAN-0063-DC Site Document Control Program
Chapter 9, Lockouts and Tagouts		
C.1 Lockout and Tagout Use	COOP 001, Section 5.4.8 Health and Safety Practices Manual (*Lockout/Tagout*), HSP 2.08	Health and Safety Practices Manual HSP 2.08 COOP Section 7.D
C.2 Lockout and Tagout Implementation	COOP 001, Section 5.4.8 Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.3 Protective Materials and Hardware	COOP 001, Section 5.4.8 Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.4 Lockout/Tagout Program	COOP 001, Section 5.4.8 Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.5 Procedures for Lockout/Tagout	COOP 001, Section 5.4.8 Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.6 Application of Lockout/Tagout	COOP 001, Section 5.4.8 Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 9, Lockouts and Tagouts (*Continued*)		
C.7 Testing or Positioning of Equipment or Components	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.8 Periodic Inspections	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.9 Caution Tags	COOP 001, Section 5.4.9 COOP 008	COOP Section 7.D Health and Safety Practices Manual HSP 2.08
C.10 Training and Communications	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.11 Lockout or Tagout Implementation	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.12 Notification of Personnel	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.13 Outside Contractors	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.14 Group Tagouts or Lockouts	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08
C.15 Shift or Personnel Changes	Health and Safety Practices Manual HSP 2.08	Health and Safety Practices Manual HSP 2.08

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 10, Independent Verification		
C.1 Components Requiring Independent Verification	COOP 001, Section 5.4.14 COOP 014	COOP Section 7.H
C.2 Occasions Requiring Independent Verification	COOP 001, Section 5.4.14 COOP 014	COOP Section 7.H
C.3 Verification Techniques	COOP 014	COOP Section 7.H COOP Appendices 29 and 30
Chapter 11, Logkeeping		
C.1 Establishment of Operating Logs	COOP 001, Section 5.5 COOP 006 COOP 012	COOP Section 5.G
C.2 Timeliness of Recordings	COOP 006 COOP 012	COOP Section 5.G
C.3 Information to be Recorded	COOP 006, Section 5.3 COOP 012	COOP Section 5.G
C.4 Legibility	COOP 006, Section 5.3 COOP 012, Section 5.3	COOP Section 5.G
C.5 Corrections	COOP 006, Section 5.3	COOP Section 5.G
C.6 Log Review	COOP 006, Section 5.5 COOP 012, Section 4	COOP Section 5.G
C.7 Care and Keeping of Logs	COOP 006, Section 6 COOP 012, Section 6	COOP Section 5.G

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 12, Operations Turnover		
C.1 Turnover Checklist	COOP 001, Section 5.3.4 COOP 007, Section 5.3	COOP Section 5.B and Appendix 11
C.2 Document Review	COOP 001, Section 5.3.4 COOP 007	COOP Sections 5.B,G
C.3 Control Panel Walkdown	COOP 007, Section 5.4.1.3	COOP Section 5.B
C.4 Discussion and Exchange of Responsibility	COOP 001, Section 5.3.4 COOP 007, Section 5.4	COOP Section 5.B
C.5 Shift Crew Briefing	COOP 001, Section 5.3 COOP 007, Section 5.4	COOP Section 5.B
C.6 Reliefs Occurring During the Shift	COOP 007, Section 5.6	COOP Section 5.B
Chapter 13, Operations Aspects of Facility Chemistry and Unique Processes		
C.1 Operator Responsibility	COOP 001, Sections 4, 5.4 COOP 006, Section 4 COOP 012, Section 4	Not Applicable
C.2 Operator Knowledge	COOP 001, Section 5.2 Training User's Manual (TUM)	Not Applicable
C.3 Operator Response to Process Problems	COOP 001, Sections 5.2, 5.4	Not Applicable
C.4 Communications Between Operations and Process Personnel	COOP 001, Sections 5.3, 5.4 COOP 007, Section 4 COOP 016	Not Applicable

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 14, Required Reading		
C.1 File Index	COOP 001, Section 5.2.3.7	COOP Section 6.D
C.2 Reading Assignments	COOP 001, Section 5.2.3.7	COOP Section 6.D
C.3 Required Dates for Completion of Reading	COOP 001, Section 5.2.3.7	COOP Section 6.D
C.4 Documentation	COOP 001, Section 5.2.3.7	COOP Section 6.D
C.5 Review	COOP 001, Section 5.2.3.7	COOP Section 6.D
Chapter 15, Timely Orders to Operators		
C.1 Content and Format	COOP 001, Section 5.3.5 COOP 013	COOP Section 5.D
C.2 Issuing, Segregating, and Reviewing Orders	COOP 001, Section 5.3.5 COOP 013, Sections 4.3, 5, 7, 8	COOP Section 5.D
C.3 Removal of Orders	COOP 013, Sections 6.2, 7.2, 8.2	COOP Section 5.D
Chapter 16, Operations Procedures		
C.1 Procedure Development	COOP 001, Sections 4.6, 4.8, 5.7 1-A01-PROC-DEV-400 Procedure Process 1-A02-PPG-003 Procedure Writing 1-A02-PPG-004 Procedure Editing, Review, and Comment	MAN-001-SDRM

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Chapter 16, Operations Procedures (*Continued*)		
C.2 Procedure Content	COOP 001, Sections 5.3.2, 5.7 COOP 015, Section 5.2 1-A01-PROC-DEV-400 Procedure Process 1-A02-PPG-003 Procedure Writing 1-A02-PPG-004 Procedure Editing, Review and Comment	MAN-001-SDRM
C.3 Procedure Changes and Revisions	COOP 001, Sections 5.3.2, 5.7 1-A01-PROC-Dev-400 Procedure Process 1-A02-PPG-003 Procedure Writing 1-A02-PPG-004 Procedure Editing, Review and Comment 1-90953-CCCP-3.0 Configuration Change Control Process Training User's Manual (TUM)	MAN-001-SDRM COOP Section 2.F
C.4 Procedure Approval	COOP 001, Sections 4.1.8, 4.6, 5.7 1-A01-PROC-DEV-400 Procedure Process 1-A02-PPG-003 Procedure Writing 1-A02-PPG-004 Procedure Editing, Review and Comment	MAN-001-SDRM COOP Section 2.F
C.5 Procedure Review	COOP 001, Sections 4.1.8, 4.6, 5.7 1-A01-PROC-DEV-400 Procedure Process 1-A02-PPG-003 Procedure Writing 1-A02-PPG-004 Procedure Editing, Review and Comment	MAN-001-SDRM COOP Section 2.F

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Chapter 16, Operations Procedures (*Continued*)		
C.6 Procedure Availability	COOP 001, Sections 5.3.2, 5.7 1-A01-PROC-DEV-400 Procedure process 1-A02-PPG-003 Procedure Writing 1-A02-PPG-004 Procedure Editing, Review and Comment 1-77000-DC-001 Document Control Program	MAN-001-SDRM
C.7 Procedure Use	COOP 001, Sections 4.8.1.4, 5.3.2, 5.7 COOP 015, Section 5.2 1-A01-PROC-DEV-400 Procedure Process 1-A02-PPG-003 Procedure Writing 1-A02-PPG-004 Procedure Editing, Review and Comment	MAN-001-SDRM COOP Section 5.C
Chapter 17, Operator Aid Postings		
C.1 Operator Aid Development	COOP 001, Section 5.3.7 COOP 010	COOP Section 5.E
C.2 Approval	COOP 010	COOP Section 5.E
C.3 Posting	COOP 010	COOP Section 5.E
C.4 Use of Operator Aids	COOP 001, Section 5.3.7 COOP 010	COOP Section 5.E
C.5 Documentation	COOP 010	COOP Section 5.E
C.6 Review	COOP 001, Section 5.3.7 COOP 010	COOP Section 5.E

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DOE ORDER 5480.19 GUIDELINE	FORMERLY IMPLEMENTED BY:	NOW IMPLEMENTED BY:
Chapter 18, Equipment and Pipe Labeling		
C.1 Components Requiring Labeling	COOP 001, Section 5.8 SX-164 Standard for Plant System Component Identification and Labeling	COOP Section 7.E SX-164 Standard for Plant System Component Identification and Labeling
C.2 Label Information	COOP 001, Section 5.8 SX-164 Standard for Plant System Component Identification and Labeling	COOP Section 7.E SX-164 Standard for Plant System Component Identification and Labeling
C.3 Label Placement	COOP 001, Section 5.8 SX-164 Standard for Plant System Component Identification and Labeling	COOP Section 7.E SX-164 Standard for Plant System Component Identification and Labeling
C.4 Replacing Labels	COOP 001, Section 5.8 COOP 014, Section 5.6 SX-164 Standard for Plant System Component Identification and Labeling	COOP Section 7.E SX-164 Standard for Plant System Component Identification and Labeling

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DEFINITIONS

Alarm Deactivation Action resulting in a change or modification in the signal, audibility, light, or indicator received or transmitted by a system to alert an operator that the system is dysfunctional or a change in system function requires operator action. Changes to set points within established ranges identified in Operational Safety Requirements (OSRs)/Technical Safety Requirements (TSRs) are not considered alarm deactivations. Set points beyond established ranges are design changes and require requisite engineering approval.

Approval Authority The entity that has responsibility for decisions regarding control of processes or policy within their purview. Approval authority may not only rest with the contractual authority on Site, but also may rest with outside agencies, such as Department of Energy (DOE), Colorado Department of Public Health and Environment (CDPHE), or Environmental Protection Agency (EPA).

Approved or Approval Date The date of the document that is signed by the approval authority, after requisite reviews and concurrences have been obtained.

Authorization Basis Those aspects of the facility design basis and operational requirements relied upon by the Department of Energy (DOE) to authorize operation. These aspects are considered to be important to the safety of facility operations. The authorization basis is described in documents such as the Final Safety Analysis Report (FSAR) and other safety analyses; Hazard Classification Documents, Technical Safety Requirements (TSRs), DOE-issued safety evaluation reports, and facility-specific commitments made to comply with DOE orders or policies.

Caution Tag A posting prescribing special cautionary measures for the operation of equipment.

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Compensatory Measures Temporary actions planned and implemented to provide an acceptable alternate means to meet the intent of the functional requirements afforded by the normal structure, system, or component (SSC) configuration and operation. When normal system operation has failed and compensatory measures are approved by an Engineering Operability Evaluation (EOE), implementation of the specified compensatory measures is required. Compensatory measures are not corrective actions (actions required to return the SSC to an operable status).

Defense in Depth A set of interrelated criteria that lead to safe and effective operations. These criteria include, but are not limited to:

- safe design of equipment and processes
- detailed and technically accurate procedures that are clear and usable
- trained and qualified personnel
- personnel doing their jobs correctly
- managers checking to ensure personnel perform their jobs correctly
- quality control inspections
- operations self-assessment
- independent safety reviews
- quality assurance audits
- performance oversight assessments and independent assessments
- Department of Energy (DOE) oversight

Deficiency Identified deviations or degradations from technical or administrative requirements; a condition that does not meet design requirements or could result in a failure of equipment or process system; a procedural error or a programmatic omission that may result in system failure, equipment failure, personal injury, or environmental degradation.

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Effective Date The date that an approved document will be implemented. This date may be the same as the approval date, or a later date to allow for distribution, training, or required reading.

Engineering Operability Evaluation (EOE) A technical evaluation performed by Engineering personnel to assess if a building structure, system, or component is operable. The term also applies to the documentation for the assessment.

Evolution Any activity or event performed by Site personnel that must be planned and scheduled to ensure that all health, safety, and environmental attributes associated with the activity or event have been identified and addressed.

Evolution Supervisor This person is the direct supervisor of operations and support personnel conducting an evolution. The individual with the responsibility to organize and prepare for an evolution. The individual who conducts the pre-evolution briefing.

Expiration Date The date that a document will expire.

Graded Approach A process by which the level of analysis, documentation, and actions necessary to comply with a requirement are commensurate with the relative importance to safety, safeguards, security, environment, and health; the magnitude of any hazard involved; the life cycle stage of the facility; the programmatic mission of the facility; the particular characteristics of the facility; or any other relevant factor.

Independent Verification The act of checking a condition, such as a component position, separately from activities related to establishing the condition or the component's position.

Information Tag A temporary posting containing general information, not of a safety nature, to assist operating personnel in the performance of their duties until a formal posting is issued or the information is no longer needed.

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Inoperable A condition where a structure, system, or component is no longer capable of performing the intended safety function in the required manner.

Issued or Date of Issue Same as the approved or approval date.

Justification for Continued Operations (JCO) See the Nuclear Safety Manual.

Limiting Conditions for Operations (LCO) See the Nuclear Safety Manual.

Operability Determination The formal decision regarding the ability of a safety significant/safety class structure, system, or component to perform the intended safety function.

Operable or Operability A condition where a structure, system, or component can perform the intended function in the required manner upon demand.

Operations The conduct of activities related to the mission or function of a structural facility or geographic area, including maintenance and technical support services.

Operations Order A document that communicates instructions or directions from the Facility Manager to operations and other facility personnel. Operations Orders may contain technical instructions, administrative direction, administrative policy, administrative instruction, special operations, special evolutions and tests, operating experiences, industry-wide concerns, or emphasis on existing procedures.

- **Administrative Operations Order** An Operations Order that is strictly administrative, based on an evaluation performed in accordance with the Operations Order Evaluation checklist.

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Examples of Administrative Operations Orders include those written for the benefit of the building personnel to clarify and organize other orders and procedures. Although an Administrative Operations Order may have technical content, it remains only administrative in nature and does not allow for performance of physical work (*such as valve and equipment operations or electrical lineups*).

- **Interim Operations Order** A Technical Operations Order issued by the Facility Manager before all of the external reviews are completed. The urgency of the Interim Operations Order is such that implementation is required for safety concerns before the review process is completed. The decision for the urgency is the responsibility of the Facility Manager.

- **Technical Operations Order** An Operations Order that has technical content based on an evaluation performed in accordance with the Operations Order Evaluation Checklist. Technical Operations Orders require external review.

Operator Aid Postings Information posted to assist operations and support personnel in performing their duties. Methods of posting include copies of approved procedures (*pages or portions*), system drawings, graphs, and curves.

Out-of-Commission (OOC) The terminology used for equipment, components, or systems when they are removed from service and no future use or mission is identified. OOC equipment, components, and systems may be retired in place.

Out-of-Service (OOS) The equipment or system is required to support the current mission by a facility and cannot, or should not, be operated until corrective maintenance is completed. Restoration to service is intended.

APPENDIX 34

Glossary
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Pre-Evolution Briefing (PEB) A complete briefing of the work necessary to perform an approved evolution, including discussion of procedures, hazards, safety precautions, controls, expected upsets and anomalies, emergency response, and other items relevant to the evolution.

Qualified Staff Member An individual on the Facility Manager's staff whom the Facility Manager deems capable, competent, conscientious, and who is considered to have the expertise on the subject matter (a Subject Matter Expert (SME)).

Round Sheets Controlled sheets used by operations personnel to collect data, record equipment status, note unusual conditions, and note trends.

Safety Structures, Systems, and Components See the Nuclear Safety Manual.

Shift Order A document that communicates timely information that is pertinent for only a short time from the Facility Manager to the shift operations personnel. Information may include such items as impending procedure changes, equipment changes, or notification of work priorities, upcoming evolutions, and facility visits.

Spurious Alarm An alarm that actuates for other than its designed intent.

Standing Order A document issued by senior management that provides administrative guidance or instruction applicable to the Site.

Telephone Concurrence (Telcon) Document approval or concurrence received by telephone.